da

New York Rules

	weight	weight	circumferece	circumferece	rubber		
	oz min	oz max	inches min	inches max	oz max	Notes	Source
1854	5.5	6	8.675	11	x	Defined by just 3 clubs in this year	19cbaseball.com
1855					x	No data found	
1856					x	No data found	
1857	6	6.25	10	10.25	x	India rubber wrapped in yarn	Laws Of Base Ball, 1857
1858	6	6.25	10	10.25	x	India rubber wrapped in yarn	NABBP Rules, published
1859	5.75	6	9.75	10	x	India rubber wrapped in yarn	NABBP Rules, published
	In 1859 Chadwick noted that the ball was a bit too large for skillful fielding,						
	so reduced the ball size and weight for 1860						
1860	5.75	6	9.75	10	x	India rubber wrapped in yarn	Beadles Dime Rule Book, 1860
1861-67	5.5	5.75	9.5	9.75	x	India rubber wrapped in yarn	Beadles Dime Rule Book, 1861-67
1868-70	5	5.25	9.25	9.5	x	India rubber wrapped in yarn	Beadles Dime Rule Book, 1868-70
1871	5	5.25	9.25	9.25	1	India rubber wrapped in yarn	Beadles Dime Rule Book, 1871
1872	5	5.25	9	9.25	1 *	Vulcanized rubber wrapped in yarn	Beadles Dime Rule Book, 1872
						Ball has been same weight/size since 1872	

Massachusetts Rules

1858-60	2	2.75	6.5	8.5	x		1860 Beadles

Other Notes		
Misc	Sheepskin was popular, but horsehide used too.	Game of Inches, P Morris
	Horsehide seems to have taken over in 1870s	
	Van Horn used sheepskin	
1870	Introduced Peck & Snyder "deal ball" due to tedious high score games	Game of Inches, P Morris
	per Chadwick. Cores before used too much rubber.	
	Common theme with the 1871 Beadles rule limiting core to 1 oz rubber. ?	
1871	National Association of Professional Base Ball Players	*does this have a different rule for the ball ?*
1876	Start of National League : Club based	*does this have a different rule for the ball ? Reach Guide ?*
1880	Mahn double cover ball Introduced, using wool yarn and horsehide.	Game of Inches, P Morris
1883	American Association tried a double dipped rubber ball from Reach	Game of Inches, P Morris
	which was then covered. Too bouncy	
	The "figure 8" stitching was devised by Col William A Cutler	
	and a new wound core was developed by John W Walcott	
	Horsehide, then cowhide was used for the leather	
	Use of live ball, dead ball, medium ball, but no notes on how much material	
	Dark leather used by Ross and other base ball makers as it was easier	
	for the players to see when the ball was hit in the air on a clear day	
	Star shape pattern: Term for cover in early game.	Brooklyn Herald, July 9, 1888
	4 sides like a flower petal for cover in early game	Game of Inches, P Morris
	Base ball size and weight based on cricket ball ?	Roger Kahn, The Head Game
	Base ball size and weight based on cricket ball for safety of fielders	Chadwick ref: Game of Inches, P Morris
	Web site to check out on factories	http://www.baseballfactory.org/aboutBFC.html

Materials used
Strips of rubber from boots, rolled together to form a ball
Rubber strips put in boiling water, then molded into ball shape
In Lake regions, use of a sturgeons eye
Wrapped in woolen yarn
Covered in rude leather or cloth
Sheepskin popular due to belief it lasted the longest.
Horsehide gained popularity in 1878 as best leather, but used prior to 1878.
Before 1880 any leather was acceptable.

Process stuff
Covers cut with large steel punch, hit with a mallet. (Figure 8 at this time)
Using set up to wind yarn. Skeins of yarn on spools.
They use a cup like feature to hold the ball, so they can pound the ball as they go, to harden it.
Balls rolled, under pressure, in polished groove, to flatten seams.
Staking the leather to stretch It first.
Placed it across a block to smooth it out after stretching.
Holes punched with an awl. 1/8" from edge.
Use of saddlers horse to stitch the ball.
The clamp could make the ball odd shape, so used rollers to bring it back into shape.
Double cover balls tried, Louis Mahn. 1 oz vulcanized rubber, woolen yarn until about 2/3 size.
Then a leather cover added, then more yarn, but loosely added to correct size, then top cover.
Loosely added yarn was to soften the ball on the hands.
Major manufacturers used 2 oz rubber strips, wrapped into a round ball.
Course yarn fine yarn then worsted yarn, all dry, wrapped in horsehide (William Vogel)
1864 JB Shibe, use of wetted yarns. Placed in oven, and baked so yarn would contract around the ball.
Then wet leather and baked in similar fashion.

People we know made base balls:

In 1858, Harrison P. Harwood and Sons of Natick, MA (c/o North Avenue and Main Street) became the first factory to produce baseballs
http://mgrp-project.weebly.com/baseball-factory.html
http://www.wickedlocalmediasolutions.com/blog/throwback-thursday-natick-home-of-the-first-baseball-factory

Harvey Ross (Ryan Ross ?), who was a sail maker and member of the Atlantic Club of Brooklyn. 1½ ounces of rubber and was considered a dead ball. Popular in 1855, 1856. (1)

John Van Horn, second baseman for the Baltic Club of New York, in the 1850's, was the leading producer of baseballs in the early 1860's. Van Horn, who was a shoe maker used rubber from

old shoes to comprise the core of his baseballs. He used between 2 and 2½ ounces of rubber in baseball, which translated in to a "lively" ball and used sheepskin for the cover (1)

Edward I. Horsman was known to produce baseballs of different degrees of "liveliness,"

One of the largest sporting goods businesses was owned by James F. Masters

AG Spaulding/Spalding

Andrew Peck and Co.,
Peck and Snyder,
Rice, In NY -> sold out to S.W. Brock in Brooklyn, NY, who then invested heavily in base ball making in early 1870s.
George Ellard, Cincinnati, OH,
John Whiting, in NY

1870 The New York Rubber Company reportedly manufactures a ball with a rubber cover which is deemed a failure for baseball uses because the rubber cover tears easily.

AJ Reach (manufactured)
Mass producing machinery. Ben Shibe. Worked for AJ Reach. Used hydraulic pressure.
Mass producing brought various grades of base balls. High quality to low quality.
Covers cut with large steel punch, hit with a mallet. (Figure 8 at this time)
Using “stitching horse” set up to wind yarn. Skeins of yarn on spools. Horse has a cup like feature so they can pound the ball as they go, to harden it.

1888, winding machine brought into use to remove manual winding of yarn.
1890 Machine Die for cutting covers, and rolling machines to smooth the ball out.
This is a reference citation as to what they called the style of cover used in the early days. I think “lemon peel” is actually a modern vintage base ball term.. which really makes no sense.. but this article, which also has some process and materials info, calls that early ball a “star” pattern ball. Richard Hershberger posted this on Facebook. Brooklyn Herald, July 9, 1888

MOUTHS FED BY BASE BALL.

The Making of Bats and Balls a Big Industry—A Chance for a Fortune.

The national game of base ball has taken so deep a hold upon the youth of this generation that, to keep pace with the demand for balls and bats, big factories have sprung up in many localities, says the New York Tribune, and hundreds of working men and women gain a livelihood turning the bats over their lathes or sewing the covers by hand over the inner core of the sphere, which is now made by machinery. Bats are shipped to this city by the carload from Michigan and West Virginia, and it is estimated that 50,000 cords of ash and willow wood were thus used last winter for this summer's trade. The bulk of the bats are used by amateur players, of course.

Willow is the favorite material for the popular bat, as its lightness is combined with a sufficient amount of strength for youthful players, and West Virginia turns out the best grade of this variety. The superior toughness of ash makes it indispensable for the great strain which a professional player subjects it to, and Michigan's forests furnish an inexhaustible supply of this tough wood. The manufacture of balls demands more care. The better class of balls, those of regulation size and weight, as prescribed by the professional rules, are covered with horse hide, stretched with double linen thread, well waxed and smoothed by machinery. The inner core is of rubber, carefully wound about with yarn by hand until the correct size is obtained.

The practice ball, or boys' ball, is covered with sheepskin, and is more cheaply and roughly made. The core is usually composed of leather scraps, which are pressed into a spherical shape by machinery and have no more yarn wound aroundjthem than is necessary to hold the scraps together until the cover is put on. The design of cover now in universal use differs widely from the old "star" pattern. It consists of two strips of leather cut something like the figure 8, or even like the heelless sole of a baby's shoe. These, when laid over the sphere, exactly cover it and are more easily sewn together than any other pattern, and if the man who invented it had only patented his idea, he might have been reaping a fortune for his pains.

Work items:

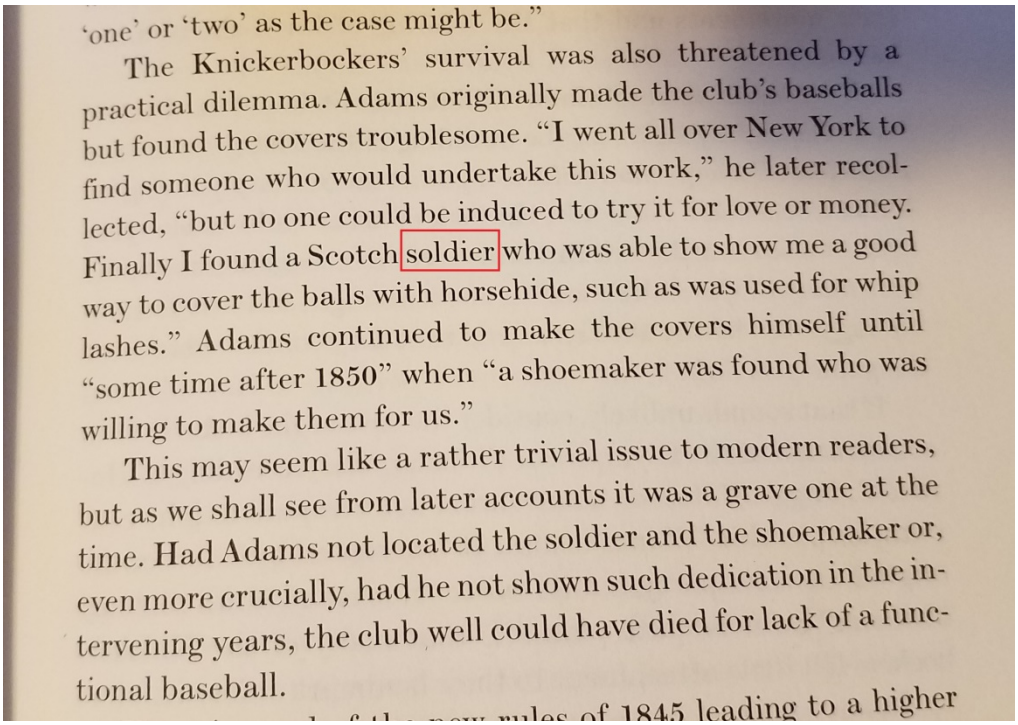
The history and manufacture of the baseball, by William R Vogel **
Referenced in Peter Morris' book, A Game of Inches, 2nd edit, p 273, col 1. Bottom.

** Note. Only available through HOF in Cooperstown.
Would love to get some screen shots.

These are the only 2 I am missing right now…
San Francisco Examiner, Jan 8 1888.
Chicago Herald, May 1, 1890. Story about orange peel. “most men ot to-day remember”..

Importance of having a base ball.
From Peter Morris book, But Didn’t We Have Fun ? p31.
Reference to Sporting News, Feb 29, 1896 article. Please note red box. Morris says “soldier” but I have seen many other accounts that call him a “saddler” in that quote.

I don’t want anyone getting hung up on which it is.. soldier or saddler.. the key here is the reference to the importance of the ball in the last paragraph.



'one' or 'two' as the case might be."

The Knickerbockers' survival was also threatened by a practical dilemma. Adams originally made the club's baseballs but found the covers troublesome. "I went all over New York to find someone who would undertake this work," he later recollected, "but no one could be induced to try it for love or money. Finally I found a Scotch soldier who was able to show me a good way to cover the balls with horsehide, such as was used for whip lashes." Adams continued to make the covers himself until "some time after 1850" when "a shoemaker was found who was willing to make them for us."

This may seem like a rather trivial issue to modern readers, but as we shall see from later accounts it was a grave one at the time. Had Adams not located the soldier and the shoemaker or, even more crucially, had he not shown such dedication in the intervening years, the club well could have died for lack of a functional baseball.

of the new rules of 1845 leading to a higher

Spaldings Official Base Ball Guide, 1890, p35-36

THE MODEL BASE BALL.

In the early days of the national game, when the public interest in the sport was centered in New York and its vicinity, the balls used by the clubs were made by John Van Horn of New York and Harvey Ross of Brooklyn. The demand was comparatively limited, and those two original makers of base balls, could supply it very readily without entrenching upon the time required for their ordinary avocations; inasmuch as at that period the leading clubs did not play over a dozen matches a season. The old balls of the period were of simple manufacture, and no two were made exactly alike; Van Horn used to cut up old rubber shoes into strips from which he wound a ball of about from two to two and a half ounces of rubber, and then covering this with yarn and the yarn with a sheepskin cover, the ball of the period was ready for use. It was years after this that anything was done looking to a regular manufacture of base balls. Here is the rule adopted by the National Association in 1857. Rule 1st. *The ball must weigh not less than six, nor more than six and a quarter ounces avoirdupois. It must measure not less than ten, nor more than ten and a quarter inches in circumference. It must be composed of India rubber and yarn, and covered with leather.*"

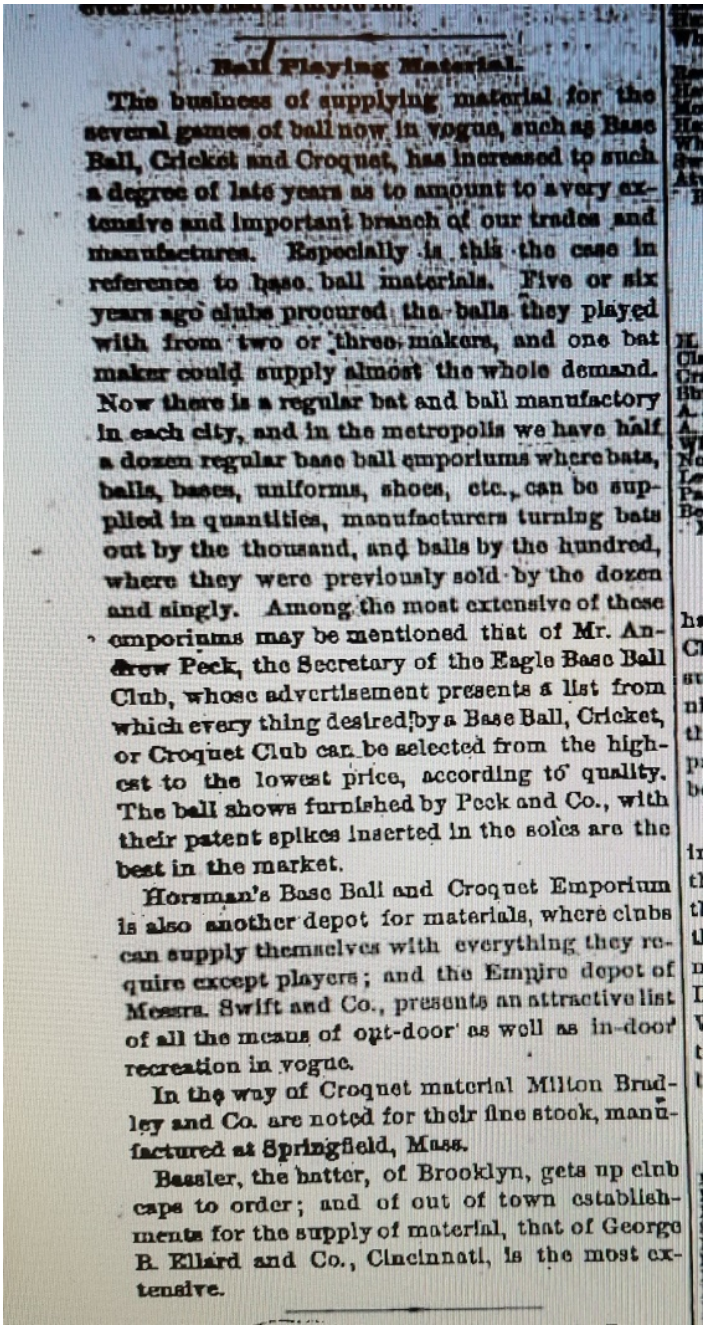
When the ball clubs began to multiply by the hundred throughout the country, the necessity for a regularly manufactured ball became manifest; and thus it was that a series of experiments, in producing the very best ball for use, culminated in the manufacture of the perfect regulation balls of the period, which are now made by the million each season. In the working out of the several experiments, covering a period of over fifteen years, the fraternity had to play with a variety of balls, and it was found that it was absolutely necessary in reaching out for a perfect condition of play in the rules, that the regulation ball in use should be one to be relied on for equality in its elasticity, for endurance of the hard hitting process, it was subjected to, and for its keeping its form during the test of a prolonged game. These requirements were finally reached in the now perfect Spalding League Ball, which the experience of the past four or five years has shown, cannot be further improved upon.

In testing the old time balls by each season's experience on the field it was found that the cotton yarn used in covering the rubber center ball was not sufficiently elastic for the purpose. Then too the sheepskin outer covering proved to be too frail to withstand the usage of actual play. Besides which, the rubber strip composing the center of the ball was too uncertain in its elasticity to suit a perfect ball. Then came the small one ounce ball of vulcanized rubber for the center and the strong horsehide leather replaced the sheepskin outer covers, and woolen yarn was substituted for cotton for the covering of the rubber center. These improvements, however, failed to yield the perfect ball, for experience proved the improved ball to be uneven in its elasticity, and apt to get out of form before half the game was over. In the seventies the double cover improvement was introduced, but this failed to give the satisfaction expected, and further experiments were tried. Lastly the Spalding League Ball was improved to its present point of excellence by the introduction of a plastic cement in its composition, which was patented, and the effect of this was such as to do away with the unreliable double cover.

The thin plastic cement now used in the Spalding League ball holds the inner ball in place and prevents the yarn from shifting. Unlike the discarded double cover, the plastic cement is pliable, and when hit by the bat yields with the rubber and yarn, makes it more elastic and pliable and soft to the hands, and at the same time it retains its perfect shape. Another point in its favor is the absolute certainty of one ball acting just like another, which is a very important feature in closely contested games.

The National League and American Association adopted the plastic cement ball in 1886 (or at the time of the first Joint Rules committee meeting) and since that time there has been no complaint from players as to the elasticity or evenness of the ball.

The Base Ball Players Chronicle, June 27, 1867 **Sporting Life, March 13, 1890**



Ball Playing Material.

The business of supplying material for the several games of ball now in vogue, such as Base Ball, Cricket and Croquet, has increased to such a degree of late years as to amount to a very extensive and important branch of our trades and manufactures. Especially is this the case in reference to base ball materials. Five or six years ago clubs procured the balls they played with from two or three makers, and one bat maker could supply almost the whole demand. Now there is a regular bat and ball manufactory in each city, and in the metropolis we have half a dozen regular base ball emporiums where bats, balls, bases, uniforms, shoes, etc., can be supplied in quantities, manufacturers turning bats out by the thousand, and balls by the hundred, where they were previously sold by the dozen and singly. Among the most extensive of these emporiums may be mentioned that of Mr. Andrew Peck, the Secretary of the Eagle Base Ball Club, whose advertisement presents a list from which every thing desired by a Base Ball, Cricket, or Croquet Club can be selected from the highest to the lowest price, according to quality. The ball shows furnished by Peck and Co., with their patent spikes inserted in the soles are the best in the market.

Horsman's Base Ball and Croquet Emporium is also another depot for materials, where clubs can supply themselves with everything they require except players; and the Empire depot of Messrs. Swift and Co., presents an attractive list of all the means of out-door as well as in-door recreation in vogue.

In the way of Croquet material Milton Bradley and Co. are noted for their fine stock, manufactured at Springfield, Mass.

Bassler, the hatter, of Brooklyn, gets up club caps to order; and of out of town establishments for the supply of material, that of George B. Ellard and Co., Cincinnati, is the most extensive.

remotest likelihood of anything of this sort.

ANCIENT BASE BALLS.

The Famous Veteran, A. J. Reach, Tells Who Made the First Ball Ever Used in to the National Game.

The famous old-time player, A. J. Reach, now president of the A. J. Reach Company, the great base ball and sporting goods manufacturing concern, was recently queried by a California customer as to the original balls used in the infancy of base ball. Here is Mr. Reach's answer, which possesses a certain historical interest and value:

Philadelphia, Pa., February 2.—My dear Mr. Bekeart: Replying to your favor of the 19th ult. regarding base balls, etc., you say Mr. Lowry would like to have, will give you some thoughts from memory.

As to the first base balls, my recollection of them dates from about 1855 or '56. The most popular ball in those days was the Ross ball; Harvey Ross, the maker, was a member of the Atlantic Base Ball Club, of Brooklyn, and a sail-maker by trade; his home was on Park Avenue, where he made the balls. John Van Horn was a member of the Union Club, of Morrissania, New York; he had a little boot and shoe store on Second Avenue, New York City. These two makers turned out the best base balls for some years, and they were used in nearly all of the match games that were played up to the early '70s. E. I. Horsman, of Brooklyn, New York, also made balls in the early '60s for the market, not having the success, however, of the Ross and Van Horn balls among the experts of that day.

The popular clubs of those days, as I remember, were the Gotham, Eagles, Empire, Knickerbocker, Mutual and Union of New York City, most of them playing at the Elysian Fields, Hoboken; the Atlantic, Excelsior, Eckfords, Putnam and Continental were all of Brooklyn. These mentioned are the oldest contesting clubs that I remember, having no date at hand at present.

As I look back to those early days of our national game and remember the great interest displayed then by the crowds on match days in all the movements of the players, I do not wonder at its growth, and that it now takes a field in those same cities with a capacity to take care of the crowds of from twenty-five to forty thousand people, and they will even grow from these figures. Then the playing field was a pretty sight, being fully two-thirds surrounded by carriages and wagons filled with people, and inside of the line of carriages was the crowd sitting and standing until they almost encircled the playing field. I am referring back to the days when no entrance fee was charged, so while there was no money there was no lack of interest and lots of excitement when the strongest clubs got together. With best wishes, I am, yours truly, A. J. REACH.

The Base Ball Players Chronicle, Sept 5, 1867. (4 pictures)

Base Balls.

Our attention has of late been called to the necessity of a change in the size and weight of the base ball, and the establishment of some stringent rule having the effect of preventing any manufacture of base balls, for club purposes, of a greater weight or size than that established by the National Association. We now scarcely receive the report of a ball match in which some severe injury has not been sustained, and that, too, mainly from the ball, the result, in nearly every instance, being traceable to the weight and size. Experiments were made by cricketers years ago, to ascertain the best size and weight of a ball for fielding purposes, and the result was the permanent establishment 5¼ *ounces* in weight and *nine inches* in circumference; and this weight and size, with a limit to 5¼ ounces in weight and 9¼ inches in circumference, would be found the correct figures for the standard measurement of a base ball.

The importance of a regular standard, in this respect, and of at once establishing the size of the ball permanently, has not been sufficiently estimated, from the fact that the difference in the effects of various sizes of balls has not been practically examined into. Another thing affecting this ball question, is, that the generality of manufacturers have only studied present profits in the regulation of the size and weight of the balls they make, without any regard, apparently, for their future reputation as makers of "regulation" balls of the legal size, weight and material. Having found that clubs who excel in batting powers, and who lack in fielding skill, purchase large, heavy and elastic balls in preference to those of legal size, which, though, hard and elastic, are not large enough to be hit easily, or heavy enough to make them difficult and dangerous to field when coming swiftly from the bat, they have not hesitated, in some instances, to make balls of illegal size to suit the demand. Hence we find that a large quantity of unfair balls are in the market, a specimen being in our possession, stamped with the name of a well known maker, weighing *six and a half ounces*, and measuring within a fraction of *ten inches*. These balls, too, we learn, are in great demand by country clubs; and because there is such a demand the market is to be supplied with them, even if the making of such a ball is a fraud, or its being played with results in serious injuries to fielders.

Under the circumstances of the making and using of balls of such illegal size and weight, it is no wonder that we learn of men being killed by being hit in the head with a base ball, or of fingers and even arms and legs being broken by blows from such balls. Why is it that cricketers, with a ball far harder than the hardest base ball, do not sustain the number of injuries to their hands in fielding in a whole season that ball players do in a single match? Simply because the additional half ounce on every quarter ounce in weight, and inch or half inch in size, admits of such a ratio of increase in the force of a ball as to make the difference fatal in its results. That is, take a cricket ball of a quarter of an ounce less in weight and an inch less in circumference than a base ball, the former being hard and not half as elastic as the latter, and let both be hit by the bat with the same force, while the former will be grasped and

The rest of this article is on the next page

held, the latter will break through the hand, splitting the flesh or breaking the fingers, this additional power being the result of the great increase in momentum given it by the little additional weight which the increased size admits of, the ratio of this increase being surprising in extent. No one would think that such a slight increase in size and weight would lead to such results from looking at and comparing a 5¼ ounce ball with a 6 ounce one, but let both be hit with the same force and let the same man attempt to stop both from the same blow, and he would painfully realize the great difference.

But there is one point to which we desire to call the attention of clubs who are not particular enough in ascertaining the exact size and weight of a ball previous to a match, and that is, that any game, in which a ball over size and weight —they never get them under—is used, *becomes "null and void"* and is no match, as the use of a ball of illegal size and weight is an infringement of the rule which section 40 punishes with the penalty above referred to.

Manufacturers of base balls may not hitherto have regarded this matter in the important light in which we view it, and they may have supplied the demand for large and heavy balls unconscious of any wrong-doing in the matter. A little reflection, however, will teach them that by supplying an article illegal in size and weight to clubs who believe that their stamp on a ball is a full guarantee of its being of the regulation size and weight, they commit a fraud upon the customer as much as if they were to introduce into the ball a material not named in the rule governing its manufacture. Ball makers will find that those who use the best material and workmanship, and who make every ball the legal size and weight, will eventually profit the most in sales, as they certainly will in reputation. We shall advocate that the next Convention endorse only those manufacturers of base balls who will give the National Association a guarantee that every ball they make for club use shall be of the regulation size and weight as well as material.

Cleveland Plains Dealer, April 1, 1888 (2 pictures)

league club.

THE BASE BALL, PAST AND PRESENT.

The American base ball most used as implements for recreation has in its make up always been governed by strict rules prescribing in minute terms just how and of what it should be made, the size, weight and covering.

Back in 1867 when Senator Arthur P. Gorman of Maryland was president of the "national association," an organization composed of about two hundred amateur clubs located in all the principal towns and cities of the country, the ball was described as follows in section 1 of the rules and regulations: "The ball must weigh not less than 5¼ nor more than 5½ ounces avoirdupois. It must measure not less than 9¼ nor more than 9½ inches in circumference. It must be composed of India rubber and yarn and covered with leather."

The balls then most in use were made by Peck & Snyder of New York, Harvey Rose of Brooklyn and Horsman of Philadelphia, and were built as follows: A small ball composed of strips of india rubber tightly stretched and wound formed the center, around which the yarn was very tightly wound, as it had to be to get the required weight in the prescribed size. This was covered by leather, quartered, and not in the shape now used. This made an exceedingly lively ball, one which it was almost impossible for an infielder to handle and which, with the slow, straight pitching of those days was provocative of enormous scores, among which home runs figured most prominently. Scores of from fifty to one hundred runs were very common.

This ball continued in use until 1870, when its size was reduced to its present dimensions, viz.: From 5 to 5¼ ounces in weight and from 9 to 9¼ inches in circumference. Also, about this time the amount of rubber began to be reduced for the purpose of deadening the ball, but there was no stipulated amount required. This was taken advantage of by clubs. Organizations containing good batters ordered their base balls made with plenty of rubber, thus making them lively; while the clubs which excelled in fielding but were deficient in batting had theirs made with very little rubber, which gave them a decided advantage. The tendency, however, was towards deadening the ball and increasing the fielding and pitching skill and this was carried to such an extent that in 1875 and 1876 balls were made with very little and many of them with no rubber in them. But the hitting under this sort of method was very light. So the national and international leagues, in adopting their rules, stipulated that the ball should contain "one ounce of vulcanized rubber molded." In 1878 the Mahn "double cover" ball was introduced and was the first ball of the kind ever used. It was made as follows: A ball of molded vulcanized rubber, one ounce in weight, was taken and wrapped with woolen yarn very tightly until it was about two-thirds the size of the ball required, this was then covered with horse hide; this ball was then again wrapped with yarn, but not so tightly until of the requisite size and again covered with horse hide. The "cushion," that part of the ball between the inside ball and the outer covering, was not made so hard so as to be more easily handled by catchers and other players; the inside ball being very compact gave enough elasticity to the ball. It was also found out at this time that horse hide was the best covering for base balls and it is still so considered. Other balls were used by the different leagues and associations, made according to the old rule, but not having the double cover.

In 1883, in its second year, the American association adopted the Reach ball, which is in one sense also a double ball. Its composition is as follows: A round molded ball of pure rubber weighing threefourths of an ounce. This is wrapped with woolen yarn until about onehalf the size of the regular ball, and is then dipped in a composition of rubber. It is again wrapped with woolen yarn until of the proper size and then covered with horse hide. This ball has been found to be the best ball ever used and its success has been a veritable gold mine to Al J. Reach and his partners, as his ball is in use wherever base ball is known. The Spalding ball used by the national league is made by this process, although not by Reach as is often supposed. There is the best authority for the statement that Reach & Co. make the enormous quantity of 1,000 dozen base balls per day in their giant factory, where they employ over 400 hands. This includes all grades, from the 5-cent ball made of leather scraps and molded into shape by immense hydraulic pressure up to the association ball which is considered the acme of base ball manufacture. There are many other base ball manufacturers, all of whom do a greater or less business.

This will give some idea of the immense hold this national game of ours has upon the youth of our country.

A SCHEME FOR NEXT WINTER.

New York Clipper, Apr 16, 1870

THE QUESTION OF ELASTIC vs. "DEAD" BALLS.

During the early years of base ball, in the days when the Knickerbocker and Gotham Clubs were the crack organizations of the metropolis, the leading ball maker of New York only used *an ounce and a half* of rubber in the composition of the balls he manufactured. At that period the old rule of the bound catch was in vogue, and it was desirable that the ball should not be so elastic as to bound over the heads of the fielders, especially of those occupying positions in the infield. Afterwards, as heavy batting grew to be popular, and large scores seemed to be regarded as a criterion of good batting, more lively and elastic balls were demanded; and when the bound catch was done away with the era of very elastic balls set in, and scores of a hundred and odd runs to a match, in place of thirty or forty, became frequent occurrences in match games. The result of this was that season after season saw the club averages of individual players increase from 2½ and 3 in 1860, up to 5 and 6 in 1867, and during 1868 and '69 the average was still further advanced. With this increase of runs, consequent upon the general use of over-elastic balls, came a proportionate increase of severe injuries to fielders arising from broken fingers and split hands; besides which there was the tedious prolongation of games caused by large scores and home runs, and also the other necessary consequences of errors in the field caused by the difficulty and danger of stopping and fielding the over weighted and exceedingly elastic balls which were the favorites of heavy batting times. In 1867 this evil grew to such an extent that in one instance a fielder actually died from the effects of a ball of this kind hitting him on the head. In 1868 the ball was reduced in size and weight to its present dimensions; but though this lessened the evil to a small extent the right nail had not been hit on the head, inasmuch as the ball was capable of being made as elastic as ever, owing to there being no restrictive regulation governing the amount of rubber which it should contain. There is no doubt of the fact that the present ball, as regards its size and weight, is about as near the right mark as possible; the fact is equally apparent, however, to all disinterested observers, that for all purposes of a full development of the beauties of our game, the ball, in its composition, is the very reverse of the right thing. The opportunities the rule governing its composition affords for making it hard and exceedingly elastic is such as to materially interfere with good fielding; the present elastic ball affording poor but heavy hitters excellent chances to score runs by means of mere muscular power, and to render true skill in batting something almost unnecessary in run getting. What is wanted is a ball hard and elastic enough to be hit well, but not one so elastic as to bound over the heads of the in-fielders when hit to the ground in the infield; and also a ball which cannot be sent from the bat with such force as to render broken fingers or split hands sure results of any efforts to stop them.

Chicago Tribue, May 17, 1877 (next 2 pages)

SPORTING.

BASE-BALL.

To understand the games of base-ball, four in number, which have been played upon the Chicago ground this year, it is necessary to refer to the "ball dispute" which has been for the space of seven days agitating the League clubs, managers and players, and, to a lesser extent, the ball-loving public. A few words of preface will serve to explain matters: At the December meeting of the League it was voted to have a uniform ball used in all games for the championship. Mr. L. H. Mahn, of Boston, was on hand and spread his wares before the Convention. That body, after discussion, adopted a ball with one ounce of rubber and a double cover. Thereupon the word went forth that a lively ball was to be used. This was unquestionably the understanding and desire of the League, as any delegate at the Cleveland meeting can testify. Mr. Mahn went on and made up a stock of balls according to the samples which the Cleveland Convention had picked out. He sent some of these balls to the clubs, and they tried them and with one voice cried out against them because they were too soft, and, after a little use, grew flabby on the outside, so that one could be picked up by the slack like a kitten by the scruff of its neck or a small boy by the slack of his breeches.

A meeting of the League having been opportunely called at Cincinnati to consider the schedule, the defects in the ball were discussed and a vote passed that the Secretary instruct Mr. Mahn to make a harder and livelier ball. Time was short before the beginning of the season and no consultation possible, so Mr. Mahn made up a dozen or so balls for each club in the West, where the play was to begin, and sent them on. One trial with one of the lot convinced the clubs that he had overdone the matter and had produced a set of spheres with the same degree of pliability that would exist in a billiard-ball covered with thin and tightly-stretched horse-hide—not more.

The first games with this ball were enough to make it plenty of enemies. Mr. Haldeman, President of the Louisville Club, writing on the subject said: "It is perfect ruination to the game; in our first game with Cincinnati we played three-and-a-half hours, and half of the audience in the grand stand left before the end of the fifth inning." Mr. Keck, of the Cincinnati Club, also expressed a most decided opinion in the same direction, but it was so marked up by dashes as to be necessarily omitted. Harry Wright, speaking on the same subject, said that it would make the expert player learn his business all over anew. An excellent player with last year's ball might be no good with the new one until after considerable practice. The Chicago Club, while anxious to play with a hard, manly, lively sphere, were not prepared for, and not agreeable to, the wooden ball, as the new one was called, because they were getting laid up and disabled on all sides.

While the strong feeling was at its height, Secretary Young had his attention called to the fact that the new ball was not made in accordance with League rules, in that it had cotton yarn next the cover, the League rule prescribing that the ball shall be wholly of woolen yarn. As soon as Mr. Young became fully convinced, by examination and otherwise, of the fact referred to, he immediately addressed the following telegram to Mr. W. A. Hulbert, of Chicago, President of the League:

WASHINGTON, May 16.—I have notified all League Clubs that the ball with the red label on the box is illegally made, and must not be used. The action of the Cincinnati Convention practically rejected the ball with the black label, to take effect after a more acceptable one could be obtained, until which time it must of necessity be considered as the legal ball. The new ball with red label can only be considered as on trial, and I requested each of the clubs receiving them to advise me if they met their expectations and approval. I did this to save the manufacturer from having a stock on hand in case they failed to meet the wishes of the League as expressed at Cincinnati.

N. E. Young, Secretary.

The rest of this article is on the next page

N. E. Young, Secretary.

A word about the illegality of the ball: On cutting one of the "red-label" balls open, it will be found that next to the cover is a layer of fine cotton yarn wound as tightly as its strength would allow. This is what makes the ball so dangerous to use and so hurtful to players. In balls wholly of woolen, after a few innings' use the outside of the ball becomes "mellowed," so that it can be handled without pain. The ball with the cotton outside cannot by any possible amount of use be softened at all. No doubt Mr. Mahn did the best he could under the instructions; he took as nearly pure rubber as he could work for his "one ounce of rubber," and it made a lump twice as large as the old kind; then he had to wind his yarn tight in order to get the required weight into the regulation size. That is probably how he came to use the cotton yarn.

The problem which was presented by these conditions was not to be easily solved, and consequently it was decided to call a meeting of the League to ponder on it. The invitations went out Tuesday, and the managers will meet this morning at 10 o'clock in the Hotel Bates, Indianapolis. Mr. Mahn, the ball-maker, who is a stockholder in, and now traveling with, the Boston Club, will be present and consult with the League. The representation will probably be: Chicago Club, W. A. Hulbert; Boston Club, Harry Wright; Hartford Club, Robert Ferguson; Louisville Club, W. N. Haldeman; St. Louis Club, Charles A. Fowle; Cincinnati Club, J. L. Keck.

Lest there should be some misapprehension about the position of THE TRIBUNE on this subject in consequence of what has been above written, it should be clearly understood that it hopes the League will to-day insist on a hard ball and a lively ball, but not to the extent which the "red-label" make shows. They should insist on having no cotton at all in the ball, and that change will of itself make things nearly right. No friend of the game "weakens" at all on the hard and lively ball, but they all insist on an instrument which is both lively and easy to handle. Mr. Mahn says that he can make such an implement. Let him try.

Despite the instructions of Secretary Young concerning the last make of balls, the Bostons wanted to play with one of them yesterday, and insisted on it, while Mr. Spalding was as fully convinced that the ball was illegal and should not be used. In this difference of opinion, which might easily have broken up the game, it was decided to leave the question to the umpire, who had been decided by the lottery to be Mr. Cone. He was of the opinion that the "red-label" ball could not legally be used, and the game began with one of the first kind, commonly called soft. It was not a contest to call for much description, though it was a splendid exhibition of generally easy fielding on both sides. In the first, second, fourth, seventh, eighth, and ninth innings the home nine went out in the same order they came up. In the third inning Smith hit well over Wright for a base, and got around to third on a passed ball, only to be left by Barnes' foul fly to Sutton. In the fifth inning Hines hit safely for first, and Bradley sent him to second on a hit to Bond, which was thrown wide to Wright. Both were left where they stood by Glenn and Smith. Anson got a hit in the sixth inning, but was left, and after that nobody could hit the ball at all.

The visitors retired in striking order in every inning except the second, fourth, and the fatal last. In the second inning O'Rourke led off with a safe hit, and got second on Anson's hesitation about throwing, or Peters' failure to cover the base. Sutton also hit safely, and while he was on first the best play of the game was made by McVey, who took a fast line-shot from Brown's bat, and cut off Sutton's return by a beautiful throw to Spalding. The crowd gave him much credit for the play.

The curiously-fatal inning to the Whites was the last, up to which time they had but one error—and that doubtful—charged to them. Bond led off with a clean hit past second, and, while he stood on first, Wright hit a grounder to Spalding, which the latter got up very cleverly, and secured the out. With a laudable desire to cut off Bond, who was on the way to second, Spalding drove the ball to Barnes, but made a rather wide shot of it, the sphere going out to left centre field, while Bond kept on to third base. Hines ran in and fielded the ball, and, with an extremely ill-founded hope of cutting off the runner at third, he "let go" at McVey, and overthrew him about three feet, while Bond ran home and won the game.

That is all there was of it, and if any one wants anything further in the way of particulars let him consult

Brooklyn Daily Eagle, Feb 3, 1884 (4 pictures)

BASE BALLS.

Manner and Extent of their Manufacture in this Country—How they were Made Fifty Years Ago—Gradual Growth of the Business—Preparing for Next Season's Trade—Dead Balls Going Out of Favor—Ball Makers' Wages.

Less than a half a century ago such base balls as are in use at the present time were entirely unknown. The balls then used were made of rubber and were so lively that when dropped to the ground from a height of six or seven feet they would rebound ten or twelve inches. A blow with the bat would not drive them so far as one of the balls now in use can be driven with the same force, but when they struck the ground they were generally much more difficult to stop on account of their bounding propensities. Fifty years ago there were no professional ball players and the demand for manufactured base balls of any description was very small. Many of the balls then in use—in fact nearly all of them—were home made. An old rubber overshoe would be cut into strips a half inch wide and the strips wound together in a ball shape. Over this a covering of woolen yarn would be wound and a rude leather or cloth cover sewn over the yarn. Sometimes the strips of rubber were put in a vessel of hot water and boiled until they became gummy, when they would adhere together and form a solid mass of rubber. This, after being wound with yarn and covered with leather by the local shoemaker, was a fairly good ball and one that would stand considerable batting without bursting. In the lake regions and other sections of the country where sturgeon were plentiful, base balls were commonly made of the eyes of that fish. The eye of a large sturgeon contains a ball nearly as large as a walnut. It is composed of a flexible substance and will rebound if thrown against a hard base. These eyeballs were wound with yarn and afterward covered with leather or cloth. They made a lively ball, but were more like the dead ball of the present than any ball in use at that time. These, of course, were all rude, homemade balls. There were no manufactured base balls of the present description until about twenty-five years ago. As clubs of professional ball players began to come into existence there sprang up a demand for a better base balls than could be obtained at that time. Several parties in different sections of the country began to experiment in base ball making, but the demand had not yet become sufficiently great to make their manufacture a paying business.

ONE OF THE EARLIEST MANUFACTURERS.

Among the first to begin making base balls in this country was a man named Rice, who commenced business in a small room in a frame building on Nassau street, New York. He continued in the business until about 1870, and became quite an expert base ball maker, although he was never able to make more than a living out of the business. About 1870 he sold out to S. W. Brock, a Brooklyn man who was then doing a small novelty business in the same locality. The new owner soon became convinced that the manufacturing of base balls was likely to become a large and lucrative business. He disposed of his novelty business and invested his entire capital—only about two hundred dollars—in base ball material. From that time the demand for base balls began to increase and the success of the business was assured. It soon became necessary to have more room, and in order to obtain it the business was removed to a large building on Doy street, where it still remains.

There are now five or six base ball manufactories in the United States, and they do an aggregate business of about $225,000 per annum. There are three leading manufactories. The largest of these is located in New York City, the second in Massachusetts, and the third in Portland avenue, in this city. The New York establishment is the only one in the country that continues manufacturing throughout the year. The Brooklyn establishment, which is known as the Wilson & Carr Company, is now just commencing business for the Spring trade, after having been closed for some months. Thirty-five hands are now employed in the Brooklyn factory—twenty girls and fifteen boys. The New York factory employs seventy-five hands the year round, and does a business of over $50,000 per annum.

Over twenty different grades and varieties of base balls are made, and the prices obtained by the manufacturers vary from twenty-eight cents per dozen up to ten dollars per dozen, according to the grade. Those sold at the latter price are the finest base balls made. Each one of these balls is carefully packed in a paper box by itself and sells at retail at one and a half dollars. The balls being made for next season's use are generally being wound on a small base of rubber, which gives them more elasticity and life than is possessed by the dead balls which have been in use for some time past. The dead balls are said to be going out of favor, because of their liability to burst when struck a hard blow with the bat.

The first steps to be taken in making base balls is to cut the covers and wind the yarn. The covers are made of sheepskins and are cut into the proper shape by means of a large steel punch. The sheepskins are spread out on large woolen blocks. The operator, with the steel punch in his left hand and a wooden mallet in his right, cuts the covers by placing the sharp edges of the punch on the sheepskin and striking the punch a smart blow with the mallet.

THE COVERS.

The covers, when cut, are almost exact imitations of the sole of a shoe. After being cut they are sent into the sewing room, where they are sewn together by girls, one end being left open so that the ball can be placed inside. The balls are wound by men. Each man has a reel in front of him on which a skein of yarn is placed. He also has a block of wood, which stands perpendicularly upon the floor. In the upper end of this block there is a polished indentation somewhat resembling a teacup, though not so deep. When the operator has wound off yarn enough to make a ball as large as a black walnut he stops winding, places the ball in the cup like form on the block of wood and with a small club which he has close at hand, strikes it several hard blows. He then winds on more yarn and repeats the blows. In this way he proceeds until the ball is large enough to receive the cover. The blows are given for the purpose of hardening the ball. After the covers are put on the balls are rolled, under considerable pressure, in a polished groove. After being rolled they are perfect and present a very smooth and pretty appearance, all the roughness of the seams being completely removed by this operation. They are now thrown into barrels and removed to the packing room, where they are packed into boxes for the trade.

Base ball makers are paid for their work by the piece. The sewing is all done by girls, and they make as much money as the men. All average from ten dollars to fifteen dollars per week the year round. J. T.

New York Times, Jan 21, 1909. Balls kept from Fashion Course games

JANUARY 21, 1909.

OLDEST BASEBALLS BEAR DATE OF 1858

Son of Knickerbockers' Captain Has Relics of Games Played at Fashion Course.

SPHERES WELL PRESERVED

New York Team Kept the Balls as Mementoes of Victory Over Champion Team of Brooklyn.

Doubts about the claims made for the "oldest" baseballs treasured as relics have no existence concerning two balls of authenticated history, brought to light by Charles De Bost of 259 West Ninety-third Street, in response to statements recently published about other relics of long-ago baseball. Mr. De Bost is the son of Charles Schuyler De Bost, Captain and catcher for the Knickerbocker Baseball Club in the infancy of the game, and the quaint old leather-covered globes he possesses came to him directly from his father, with full record of the part they had in the series of games played between the champion nines of New York and Brooklyn in 1858.

The balls resemble the modern baseball only in the general spherical outline, and now are dead dried mummies though well preserved in the gilded leather covers. The balls, according to the exact knowledge of the owner, verified by witnesses when witnesses to the games of half a century ago were available, have never left Mr. De Bost's possession since they came to him. Both have inscriptions stating the date and scores made in the games for which they were used. The older ball is inscribed as follows:

New York-Brooklyn

B. 18 ——

Fashion Course, L. I.

July 20, 1858.

The record of what was New York's score in that game has been obliterated, but the second ball, which is better preserved, leaves no doubt of the result of the championship series, the inscription on this being as follows:

Brooklyn vs. New York,

Sept. 10, 1858,

Fashion Course, L. I.

Rubber Game.

Brooklyn, 18; New York, 29.

As described to the owner of the relics by the catcher in both contests and the Captain of the winning team, the championship was played for on the old Fashion race course, near Flushing, L. I., famous then as a race track and still living in the memory of old turfmen as the scene of some of the great sectional races of ante-bellum days.

Both balls have odd one-piece covers, the leather having been cut in four semi-ovals still in one piece, the ovals, shaped like the petals of a flower, folding over the body of the ball and being sewed in four seams to complete the cover in the style that was followed before the modern two-piece cover, sewed in one continous seam, was invented.

Sporting News, Feb 29, 1896 article about Doc Adams making base balls (6 pictures)

DR. D. L. ADAMS.

MEMOIRS OF THE FATHER OF BASE BALL.

He Resides in New Haven, and Retains an Interest in the Game.

NEW HAVEN, Conn., February 24.—SPECIAL CORRESPONDENCE.—In a pleasant home on quiet Edwards street lives Dr. Daniel L. Adams, who undoubtedly, more than any other man in the country is entitled to be called the Father of Base Ball. His brother-in-law, William S. Bigge of Keene, N. H., makes this claim for him, and the facts bear it out.

Dr. Adams was born in Mt. Vernon, N. H., Nov. 11, 1814. He was, therefore, 81 years old last November, but one would not think so to look at him. He is exceedingly well preserved, and his active step and unimpaired eyesight and hearing go far to prove the value of an active interest in athletics in early life. The doctor was one of the first men to belong to an organized base ball club, and quickly took the lead in all matters connected with the growth and character of the National game.

A representative of THE SPORTING NEWS learning that Dr. Adams could tell some interesting reminiscences of the old-time games, called upon him recently and found him very willing to talk about his favorite subject.

"I graduated from Yale college in 1835," said he, "and from the Harvard Medical School in 1838, after which I became a practicing physician in New York city. I was always interested in athletics while in college and afterward, and soon after going to New York I began to play base ball just for exercise, with a number of other young medical men.

"Before that there had been a club called the New York Base Ball Club, but it had no very definite organization and did not last long. Some of the younger members of that club got together and formed the Knickerbocker Base Ball Club, September 21, 1845. The players included merchants, lawyers, Union Bank clerks, insurance clerks and others who were at liberty after 3 o'clock in the afternoon. They went into it just for exercise and enjoyment, and I think they used to get a good deal more solid fun out of it than the players in the big games do nowadays.

"About a month after the organization of this club, several of us medical fellows joined it myself among the number. The following year I was made President, and served as long as I was willing to retain the office. Our playground was the 'Elysian Fields' in Hoboken, a beautiful spot at that time, overlooking the Hudson, and reached by a pleasant path along the cliff. It was a famous place in those days, but it now cut up railroad tracks. Mr. Steven's 'castle' stands far from the site.

PRACTICED ON "ELYSIAN FIELDS."

"Twice a week we went over to the 'Elysian Fields' for practice. Once there we were free from all restraint, and threwing off our coats we played until it was too dark to see any longer. I was a left-handed batter, and sometimes used to get the ball into the river. People began to take an interest in the game presently, and sometimes we had as many as a hundred spectators watching the practice. The rules at that time were very crude. The pitching was all underhand, and the catcher usually stood back and caught the ball on the bound.

"Our players were not very enthusiastic at first, and did not always turn out well on practice days. There was then no rivalry, as no other club was formed until 1850, and during these five years base ball had a desperate struggle for existence. I frequently went to Hoboken to find only two or three members present, and we were often obliged to take our exercise in the form of 'old cat,' 'one' or 'two' as the case might be. As captain, I had to employ all my rhetoric to induce attendance and often thought it useless to continue the effort, but my love for the game, and the happy hours spent at the 'Elysian Fields' led me to persevere. During the summer months many of our members were out of town, thus leaving a very short playing season.

"I used to play shortstop, and I believe I was the first to occupy that place, as it had formerly been left unplayed. At different times I have, however, played in every position, except that of catcher. We had a splendid catcher in the person of Charles S. Dobbs, who would be a credit to the position even to-day, I am sure. He was a good batter also, and a famous player in his day.

"We had a great deal of trouble in getting balls made, and for six or seven years I made all the balls myself, not only for our club, but also for other clubs when they were organized. I went all over New York to find someone who would undertake this work, but no one could be induced to try it for love or money. Finally I found a Scotch saddler who was able to show me a good way to cover the balls with horsehide, such as was used for whip lashes. I used to make the stuffing out of three or four ounces of rubber cuttings, wound with yarn and then covered with the leather. Those balls were, of course, a great deal softer than the balls now in use. It was not until some time after 1850 that a shoemaker was found who was willing to make them for us. This was the beginning of base ball manufacturing. There is now, I believe, a factory in Philadelphia where 1,600 people are employed in this one industry.

HARD GETTING BATS.

"It was equally difficult to get good bats made, for no one knew any more about making balls than balls. The bats had to be turned under my personal supervision, the workman stopping occasionally for me to ascertain when the right diameter and taper was secured. I was often obliged to try three or four turners to find one with suitable wood, or one willing to do the work. In fact, base ball playing for the first six or seven years of its existence was the pursuit of pleasures under difficulties.

"The first professional English cricket team that came to this country used to practice near us, and they used to come over and watch our game occasionally. They rather turned up their noses at it, and thought it tame sport, until we invited them to try it. Then they found it was not so easy as it looked to hit the ball. Upon this discovery they began to find fault with the ball, and so our crack pitcher took their own hard cricket ball, and gave them every opportunity, but they had no better success.

"The first club to be organized after the Knickerbockers was the Gotham Club, and its members became our special rivals. I remember one game of 12 innings which finally ended in a tie, with a score of 12 to 12. Soon other clubs began to form in rapid succession, until there were quite a number in various places. It was then possible to have matches of no mean size. There was one series of three matches between members from all the New York clubs and all the Brooklyn clubs. Our Knickerbocker catcher, Delost, played in them all, and New York won two out of the three. At one of these matches I acted as umpire. There were thousands of people present, but no admission was charged.

"The Gotham Club was organized in 1850 and the Eagle in 1852. The playing rules remained very crude up to this time, but in 1853 the three clubs united in a revision of the rules and regulations. At the close of 1856, there were 12 clubs in existence, and it was decided to hold a convention of delegates from all of these for the purpose of establishing a permanent code of rules by which all should be governed. A call was therefore issued, signed by the officers of the Knickerbocker Club as the senior organization, and the result was the assembling of the first convention of base ball players in May, 1857. I was selected presiding officer. In March of the next year the second convention was held, and at this meeting the annual convention was declared a permanent organization, and with the requisite constitution and by-laws became the 'National Association of Base Ball Players.'"

The rest of the Doc article on next page

HE WAS CHAIRMAN.

"I was chairman of the Committee on Rules and Regulations from the start and so long as I retained membership. I presented the first draft of rules, prepared after much careful study of the matter, and it was in the main adopted. The distance between bases I fixed at 30 yards—the only previous determination of distance being the bases shall be from home to second base 42 paces; from first to third base 42 paces (qui-distant)—which was rather vague. In every meeting of the National Association while a member, I advocated the 'fly-game'—that is, not to allow first-bound catches—but I was always defeated on the vote. The change was made, however, soon, after I left, as I predicted in my last speech on the subject before the convention.

"The distance from home to pitcher's base I made 45 feet. Many of the old rules, such as those defining a foul, remain substantially the same to-day, while others are changed and, of course, many new ones added. Designed in 1862, but not before thousands were present to witness matches, and any number of outside players standing ready to take a hand on regular playing days. But we pioneers never expected to see the game so universal, as it has now become.

"I have no idea of the number of clubs at present, nor the number of players at present, nor the number of persons employed in making base ball material, but it is an important industry. Newspapers are now obliged to report games and could not afford to neglect it.

"William F. Caldwell, still living, I think, was a newspaper man who took great interest in ball playing at that time. His paper was the New York Sunday Mercury, and he used to do all he could to help the game in its columns. He was one of the first to report the matches and was generally a member of the base ball committees, though he did not belong to our club.

"The Knickerbocker Club had an existence of about 30 years, and my connection with it lasted about half that time. An old book of rules issued by the club in 1854, gives the officers and members at that time as follows:

"President, Fraley C. Niebuhr; Vice President, Alex. H. Drummond; Secretary, James W. Davis; Treasurer, George A. Brown; Directors, Daniel L. Adams, W. F. Ladd, Charles S. Debost; Honorary Members, James Lee, Esq., Abraham Tucker, Esq., Edward W. Talman, Esq.; Active Members, Duncan F. Curry, Charles H. Birney, Ebenezer R. Dupignac, Jr., Fraley C. Niebuhr, James Moncrief, Daniel L. Adams, William L. Tallman, Charles S. Debost, Henry S. Anthony, Alex. H. Drummond, George Ireland, Jr., Benjamin C. Lee, Benjamin K. Brotherson, George A. Brown, William F. Ladd, John Murray, Jr., Richard F. Stevens, Thos. W. Dick, Jr., John Boyle, William H. Grenelle, John Clancy, James W. Davis, George W. Devoe, G. Colden Tracy, William B. Eager, Jr., Otto W. Parisen, Edgar F. Lasak, Frank W. Tyron, Edwin C. Frost, Albert H. Winslow, Louis F. Wadsworth, William F. McCutchen, Samuel H. Kissam, Gershom Lockwood, Henry C. Ellis."

Lockwood, Henry C. Ellis.

SEVERAL OTHERS.

"Many others were members at one time or another. Besides those named in the list I remember two brothers named O'Brien, who were brokers and afterward became very wealthy. There was also a man named Morgan, who was very successful in business. Henry T. Anthony is the photographic supply dealer, who is well-known all over the country through his large New York establishment. Duncan F. Curry was an insurance man, and James Moncrief became, I think, a judge of the Superior Court.

"The best pitcher then developed was not a member of the Knickerbocker Club, but of the Excelsior Club of Brooklyn. His name was Creighton, and he won considerable note in his day.

"James W. Davis, a broker, and secretary of our club, is still living. He ought to go down to history as the first base ball fiend. Indeed, we used to call him a fiend in the old days, because of his enthusiasm. He was an outfielder. We had a flag on which were the words 'Knickerbocker Base Ball Club,' and I understand that he has given orders that when he dies he is to be wrapped in that flag. But most of the old players of the Knickerbocker Club have already 'come home.'"

OLD TIMER.

Sporting News, Nov 11, 1915

THE RULES AND TOOLS OF THE NATIONAL GAME

THEIR HISTORY AND DEVELOPMENT

BY JOHN H. GRUBER

The Ball and the Bat

This is the second of a series of articles by John H. Gruber, one of the game's most capable historians, on the development of baseball. It deals with the ball and the bat, those essentials of of the game, for, while Mr. Gruber in his previous articles pointed out that runs were the main things in playing the game, yet he must admit that runs could not be scored without bat and ball to make them with. The crudities of the ball and bat in the early history of baseball indicate as nothing else can how primitive the game was in the beginning. Today the baseball and the bat are works of art and their fashioning furnishes employment for hundreds of persons and the investment of thousands in factories. But let Mr. Gruber take up in his own words the history of these most essential "tools" of baseball:

The ball is the center and circumference of the game. Around it is built the national pastime, and without it there would be no use for bats, grounds or diamonds. All these are at hand, and can be reached by merely whittling the limb of a tree, placing stones or driving pegs for bases and selecting an open field. But it requires intelligence and skill to produce a ball. It is the artistic component part of the game, the others being furnished raw by nature. The ball is the symbol of the grand old sport, and the idol all fans adore. It is the source of action of the game, and never dies.

When the game first began to be played there were no restrictions as to the size and weight of the ball. But the general acceptance was that it should be made of India rubber and yarn, covered with leather, and that its proper weight should be 6 1-4 ounces and its measurement 10 1-4 inches in circumference. This was rather a heavy and cumbersome contrivance, but nothing was done in the matter until 1857 when a definite rule was adopted.

The rule reads as follows: "The ball must weigh no less than five nor more than five and one-quarter ounces avoirdupois. It must measure not less than nine and one-quarter nor more than nine and one-half inches in circumference. It must be composed of India rubber and yarn, and covered with leather, and, in all match games, shall be furnished by the challenging club, and become the property of the winning club as a trophy of victory."

This rule, in all its essentials, has come to us almost unchanged. For 18 years the regulation ball has weighed no less than five ounces and no more than five and one-quarter. In 1871, the first year of the Professional Association, the size of the ball was cut one-quarter inch, that is, from nine and one-half to nine one-quarter inches in circumference, and in 1872 it was enacted that the ball should be not less than nine nor more than nine one-quarter inches, and these figures still stand, and have stood without change for 46 years.

Home Club Furnishes Balls.

In those days, 1858, there was no organized league, and, therefore, the rule required that the challenging club should furnish the balls. In 1876, the initial year of the National League, the home club was required to furnish the balls, and it has done so every year to this day.

The section awarding the ball to the winning club is also still in force, but in a modified degree. In those days there was never more than one ball in sight. If a ball was lost, another was hunted up and it became the only one in sight. This ball was appropriated by the winners. In later years, the rule provided for more balls, and after the game the winning club demanded and got every ball that had been in play. This led to much wrangling, as the players of the losing team were unwilling to give up balls that could be used in practice. So, in 1857, the joint rules committee enacted that the winning team was entitled only to the last ball in play, and this is still the rule.

India rubber and yarn were from the very first the chief substances of which the ball was made. Before 1857 there was no limit as to the quantity of rubber and yarn, provided the ball came within the weight demanded by the rule. But in the first year of the Professional Association, 1871, the quantity of rubber was limited to one ounce, "no more, no less," the rule makers declaring that "this makes the ball lively enough for the purposes of good batting." But it seems the manufacturers used strips of rubber which made the ball rather too lively and so the next year, 1872, it was decreed that "the rubber used shall be vulcanized and in mold form."

In 1883, the American Association eliminated the yarn and rubber qualifications and ordained that the ball must be manufactured from the patent plastic com-

Continued on the next page

manufactured from the patent plastic composition under the specification and proposition made by A. J. Reach. The National League, however, adhered to the yarn and vulcanized rubber.

The Composition Indefinite.

But, in 1887, when the joint rules committee came into life, the words "yarn" and "rubber" disappeared from the rules forever. It was simply stated that the Spalding league ball or the Reach American Association (later the American League) ball "must be used in all games played under these rules." Therefore, during the past 28 seasons, from 1887 to date, the manufacturers apparently used any kind of material just so they remained within the limits of weight and measurement. Lately one of the manufacturers sprung a surprise by announcing a "cork" center for every ball.

Leather coverings were used from the very start. Before 1890, any kind of leather was allowed, sheepskin being mostly preferred, because it was the universal belief that it lasted longer. But in 1889 the rule was changed to read that the ball "must be composed of woolen yarn and two horse-hide covers, inside and outside, with yarn between said covers." From that year dates the familiar expression of "hitting the horse-hide." However, the "horse-hide covers, inside and outside," were in use a couple of seasons only, 1890 and 1891. In 1892, the simple words "covered with leather" were reinserted. In 1897 "leather," like "yarn and rubber," was scratched off the books altogether.

Until 1876, the word "ball" was never used in the plural number. One ball was expected to be sufficient. In that year, for the first time, a second ball was provided for. The rule said: "Should the ball be lost during the game, the umpire shall, at the expiration of five minutes, call for a new ball," and in 1877, "the player looking for it shall call 'lost ball,' so that the umpire can note the time and wait five minutes." The five-minute rule held good until 1886, when it was abolished.

In 1877 it was the custom for the home club to furnish six balls during a series of games, but no rule made it obligatory. In 1883 the American Association ordained that the home club must furnish the umpire with two balls for use, and "when one is batted over the fence or stands or to foul ground out of sight of the players, the other shall immediately be put in play." This rule was adopted by the joint committee in 1887, with the addition that "as often as one of the two in use shall be lost a new one must be substituted, so that the umpire at all times, after the game begins, have two in use." In 1890, the rule compelled the home club to have at least 12 balls on the grounds at each game, and that is the rule today.

Dark in Color at First.

In the olden days, when the ball was cut or ripped, needle and thread were brought into requisition there and then and the break mended. If the ball became out of shape, it was squeezed into some semblance of its natural form. In 1876 the National League rules that when a ball became unfit a new one must be called for by the umpire at the end of "even innings," at the request of either captain. This rule was in force eight years, to 1884. Then it was changed to "A new ball shall 'at once' be called for," and that order still stands.

The cover of the ball at the beginning of the history of the game was invariably dark in color. By and by it became lighter and lighter, until finally it grew pure white. It reached the hands of the pitcher in all its virgin purity, but when it shot toward the batter it was covered with sin and shame. It was soiled by rubbing in the dirt, or by licorice the pitcher carried in his mouth, or by being passed from one to the other of the infielders, each taking care that it touched the ground before reaching the other. At last, in 1896, the rule makers decreed that at no time

Continued on the next page

shall the ball be intentionally discolored by rubbing it with the soil or otherwise." And that's the rule today.

So much for the ball. But to play the game the ball must be put in action, wherein necessarily appears the bat.

Player's Most Treasured Implement.

There is positively nothing a ball player cherishes so much, as his bat. His uniform receives scant attention, and his fingers lose, while his glove is thrown recklessly about when not in use. Indeed, the bat is the instrument with which he hews his way to success, and which leads him to fame. The bat, one of the budgets of the game, has a charm alike for the kid on the lots and the seasoned veteran. Kids will pass the most attractive exhibitions of the fine and useful arts, and even wonderful toys, without appreciation, but will linger lovingly at a display of bats in a show window. If by chance they get their hands on one, they fondle it affectionately, and pass it around to be admired, commented on and tried by all. The old player feels just like that, although he is more dignified about it, but there is the same glow and sparkle in his eyes.

Why, even the rule-makers have not dared to meddle with the sacred ash ruthlessly. When the first code of rules was adopted, in 1857, it provided that the length of the bat should be 42 inches, and not an inch more, and from that day to this the rule has never been changed. The thickest part of the bat was limited to 2 1-2 inches in diameter, and it took the otherwise relentless rule-makers 40 years to add a quarter of an inch to the measurement.

From the date of the first match game, in 1846, until 1857, a stretch of 11 years, players used bats of any length and thickness they chose. They selected the wood and whittled their own bats. There was, however, one feature noticeable; the bats were invariably round and not flat like those used in cricket, and seldom measured over 40 inches in length. Yet there are stories told of enthusiasts who faced the pitcher with bats five feet long and nearly as thick as wagon tongues. It was a happy-go-lucky crowd, those pioneers of the national game, and quite as much in earnest as were their fathers who cleared the forests to erect homes, and spalled many a good bat in doing so.

In 1857, for the first time, a rule was adopted regulating the size of the bat. "The bat," the rule said, "must be round and must not exceed 2 1-2 inches in diameter in the thickest part. It must be made of wood and shall not exceed 42 inches in length."

Must Be All Wood.

This rule was not changed until the first year of the National League, in 1876. It had governed the "sticks" used in the National Amateur Association and also in the Professional Association, which flourished from 1871 to 1875, both inclusive. There were many suspicious circumstances and shady incidents during the life of the first professional league, which had come under the influence of gamblers, and this led directly to the formation of the National League, whose founders placed the game on a basis of honesty. The bat had, no doubt, suffered desecration by having holes bored into them, in which metal, particularly lead, was poured. For this reason the rule was changed by the insertion of the word "wholly" before the words "of wood."

In 1880 the National Amateur Association made a startling change in the rule by adding after the word "round" the words "or four-sided." This introduced the square bat. An authority in those days explained the contrivance this way: "The new bat, in its widest part, viz., from corner to corner at its end, is not wider than the round bat. Its four sides only extend to the handle. It is just as if a round bat had been planed off on four sides. This bat will admit of harder wood for its size than the round bat; that is, two bats of the same size and material, one being made round and the other four-sided, the latter would necessarily be lightest by several ounces. The idea of changing the form from the round to the four-sided is to enable the batsman to 'place' the ball better than is possible with a round bat."

But the change was never adopted by the National League. It was not a very popular innovation even among the amateurs, and was soon dropped.

The next change came in 1886, when the "flat" bat was made legal. Scientific batting, especially batting, was the general craze in the eighties and proved a most fascinating feature of the game. Already the "soft" or "sacrifice" bat had been ushered in by players literally according to the rule as to length and thickness. The bat was made of wood so soft that it was hardly possible for the batter to drive the ball beyond the diamond. The ball became dead after coming in contact with the mush-like bat and dropped to the ground.

To increase the operation of the spectacular bunt the rule makers decreed that the bat "must be round except that a portion of the surface may be flat on one side." They also enacted "that the handle may be wound with twine or a granulated substance applied, not to exceed 18 inches from the end." This last rule is still on the books.

Freak Bats Lose Favor.

The American Association, which came into life in 1882, did not accept the above regulations. But in 1887 the two major organizations, the National League and the American Association, decided to adopt uniform rules. Each appointed a committee on rules, and these met annually to formulate the laws of the game. The American Association ceased to exist in 1892, but in 1903 the American League took its place. Since the joint rules committee came into existence the ball teams of the entire country are playing under the same rules.

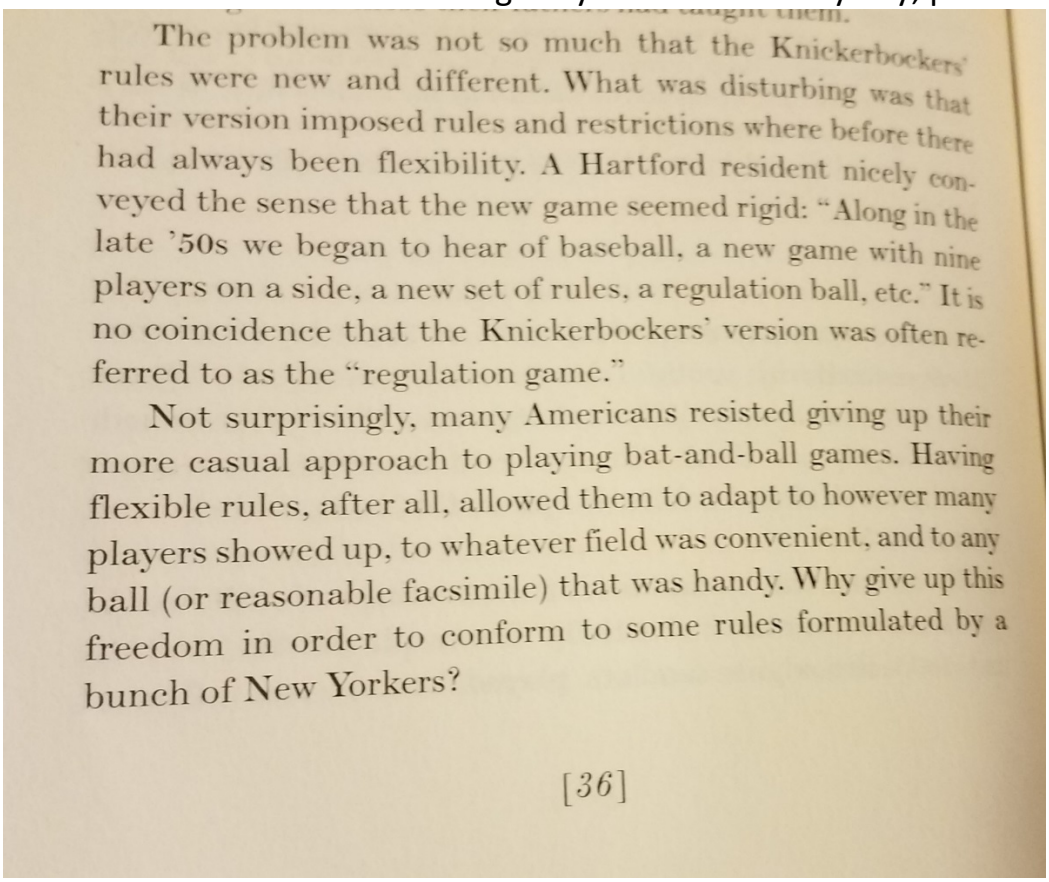
The "flat" and "soft" bats saw their end in 1893. Both were unceremoniously swept away, and have never intruded since. The rule makers stuck the knife into the soft bat by declaring that the bat must be made wholly of "hard" wood. The flat stick was cut bodily out of the rules and thrown to the winds. No attempt has been made since to reintroduce the lop-sided stick or the black-looking bludgeon, and there is no indication that any will be made in the future.

In 1895, to make the rule appear more strict, the word "wholly" was changed to the word "entirely" and at the same time, and for the only time since 1857, permission was given to increase the thickest part of the bat one-fourth of an inch, that is, from 2 1-2 to 2 3-4 inches in diameter. That rule still exists, and it is not likely that another change will be made in our day.

Here and there throughout the country a bat made famous by a timely hit that won an important game, or one wielded by a famous batsman, is still preserved. These examples, however, are few, because a player will use his favorite bat until it breaks and so becomes useless.

Some screen shots from "But Didn't We Have Fun ", by Peter Morris Following 6 pages.

This screen shot talks about using "any" ball in the early day, prior to the New York rules game.

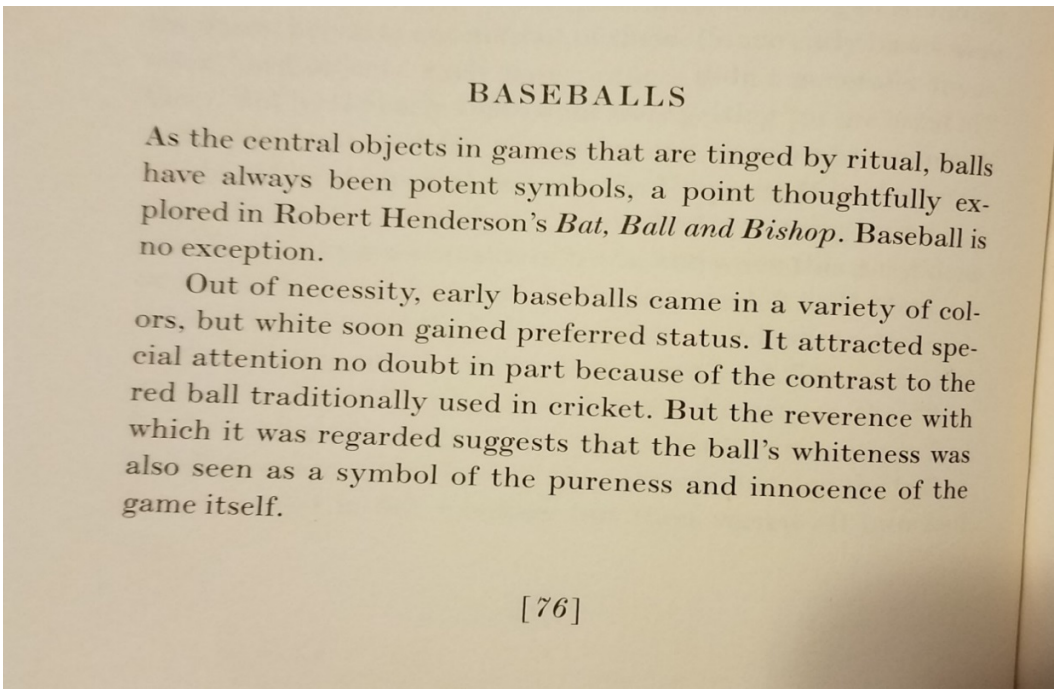


The problem was not so much that the Knickerbockers' rules were new and different. What was disturbing was that their version imposed rules and restrictions where before there had always been flexibility. A Hartford resident nicely conveyed the sense that the new game seemed rigid: "Along in the late '50s we began to hear of baseball, a new game with nine players on a side, a new set of rules, a regulation ball, etc." It is no coincidence that the Knickerbockers' version was often referred to as the "regulation game."

Not surprisingly, many Americans resisted giving up their more casual approach to playing bat-and-ball games. Having flexible rules, after all, allowed them to adapt to however many players showed up, to whatever field was convenient, and to any ball (or reasonable facsimile) that was handy. Why give up this freedom in order to conform to some rules formulated by a bunch of New Yorkers?

[36]

This screen shot talks a bit about ball colors.



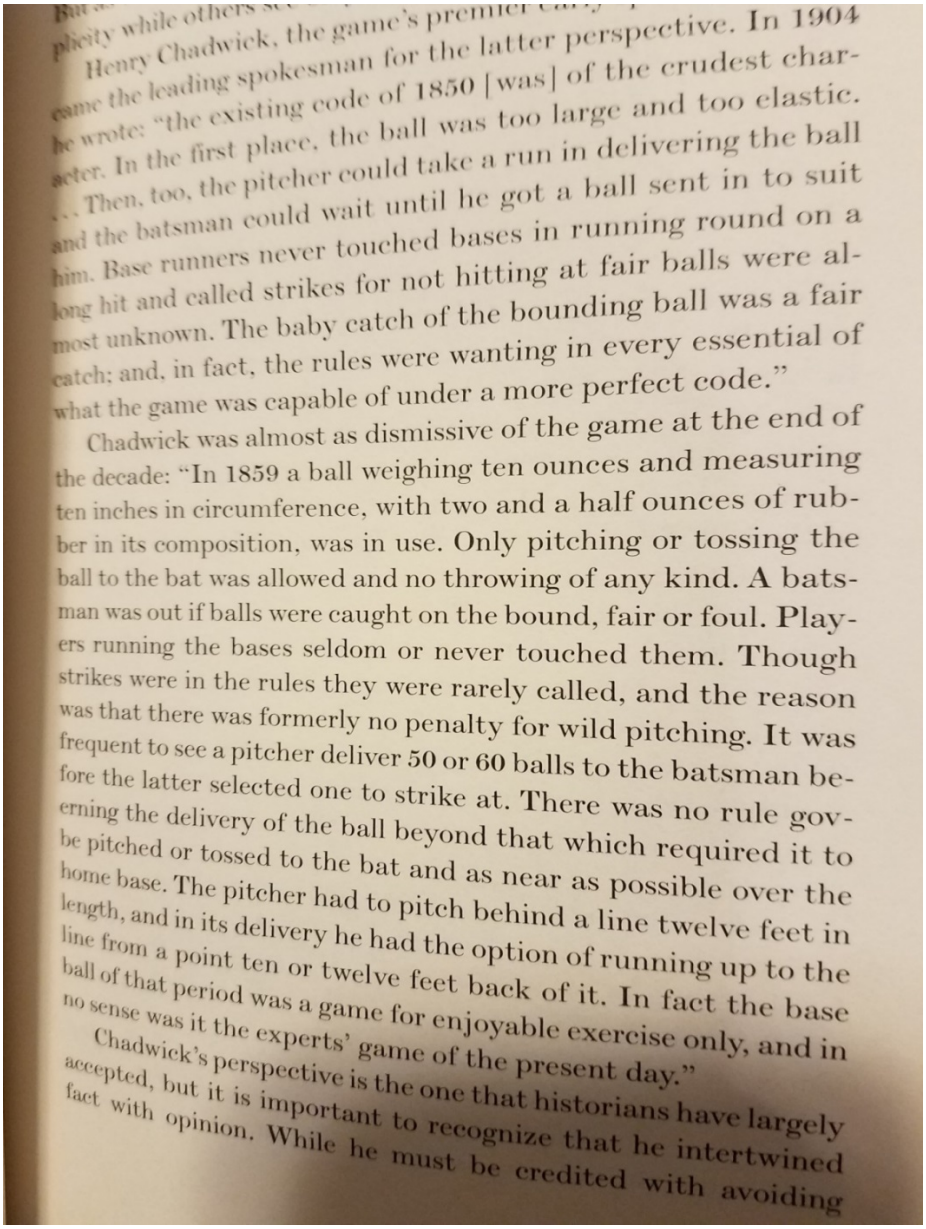
BASEBALLS

As the central objects in games that are tinged by ritual, balls have always been potent symbols, a point thoughtfully explored in Robert Henderson's *Bat, Ball and Bishop*. Baseball is no exception.

Out of necessity, early baseballs came in a variety of colors, but white soon gained preferred status. It attracted special attention no doubt in part because of the contrast to the red ball traditionally used in cricket. But the reverence with which it was regarded suggests that the ball's whiteness was also seen as a symbol of the pureness and innocence of the game itself.

[76]

This screenshot mentions balls of various sizes, materials..



plicity while others s...

Henry Chadwick, the game's premier ...

came the leading spokesman for the latter perspective. In 1904 he wrote: "the existing code of 1850 [was] of the crudest character. In the first place, the ball was too large and too elastic. . . . Then, too, the pitcher could take a run in delivering the ball and the batsman could wait until he got a ball sent in to suit him. Base runners never touched bases in running round on a long hit and called strikes for not hitting at fair balls were almost unknown. The baby catch of the bounding ball was a fair catch; and, in fact, the rules were wanting in every essential of what the game was capable of under a more perfect code."

Chadwick was almost as dismissive of the game at the end of the decade: "In 1859 a ball weighing ten ounces and measuring ten inches in circumference, with two and a half ounces of rubber in its composition, was in use. Only pitching or tossing the ball to the bat was allowed and no throwing of any kind. A batsman was out if balls were caught on the bound, fair or foul. Players running the bases seldom or never touched them. Though strikes were in the rules they were rarely called, and the reason was that there was formerly no penalty for wild pitching. It was frequent to see a pitcher deliver 50 or 60 balls to the batsman before the latter selected one to strike at. There was no rule governing the delivery of the ball beyond that which required it to be pitched or tossed to the bat and as near as possible over the home base. The pitcher had to pitch behind a line twelve feet in length, and in its delivery he had the option of running up to the line from a point ten or twelve feet back of it. In fact the base ball of that period was a game for enjoyable exercise only, and in no sense was it the experts' game of the present day."

Chadwick's perspective is the one that historians have largely accepted, but it is important to recognize that he intertwined fact with opinion. While he must be credited with avoiding

This screenshot brings up the orange peel, plus a bit on materials used.

Ref to citation on “orange”, Chicago Herald – May 1, 1890, but cannot find it in that paper.

available. A committee had to be formed, and the problem was not solved until one of its members "came across a German immigrant who was the possessor of a pair of rubber overshoes. These he bought, after much dickering, for $10, and with the yarn unraveled from a woolen stocking and a piece of a rubber overshoe the first ball ever used in this city was made."

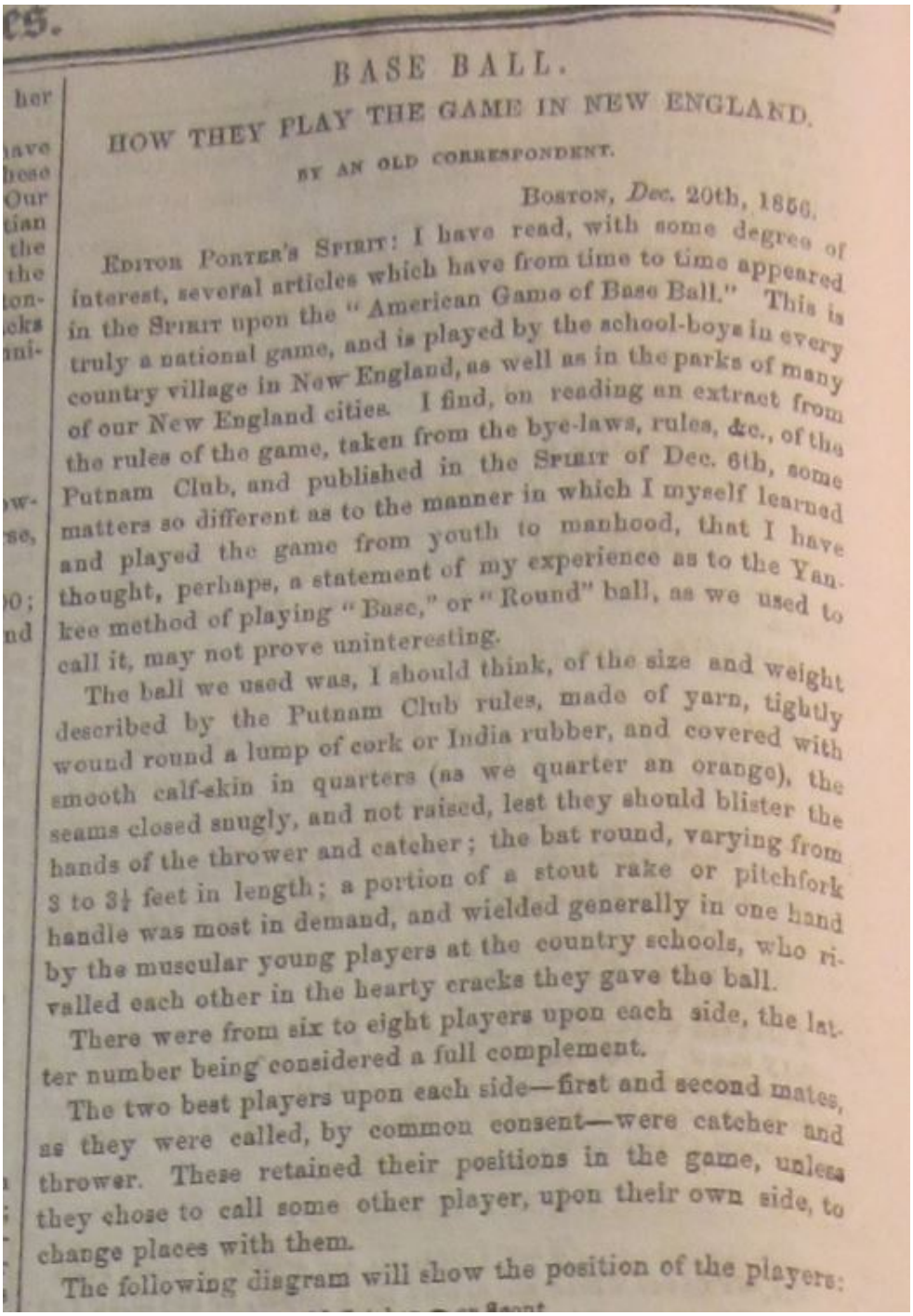
According to an account published nearly a century after the fact: "An old rubber shoe, melted down, became the core of the first ball manufactured [in Rockford, Illinois]. Around it, yarn was wrapped. An orange peel was quartered and used as a model for the leather cover which was sewn by George Lane, harness maker."

An 1890 piece in the *Chicago Herald* summed up the sacrifices that were typically involved: "Most men of to-day remember the time when they shinnied around and found a smooth old boot leg and a ball of yarn which they carried to the good mother with a request that she take her shears and needle in hand and fabricate a ball. In doing this the good mother cut the leather in much the same form that an orange peel takes on when neatly prepared for dessert, and then she wound the ball of yarn rather tighter than usual, boy patiently (for a wonder) holding his arms outstretched to do service as a reel. Next she sewed the leathern flaps together with shoemaker's thread, breaking many needles and losing a little temper during the operation, but finally turning out a very acceptable sort of ball—somewhat inclined to rip, it is true, and quick to lose its perfect sphericity, but still a mighty handy thing to have in one's pocket when ante-over or town ball or rounders was proposed."

An early Boston ballplayer recalled that in his youth a different part of the baseball's innards was in shortest supply, yet he had similar recollections of the rummaging that ensued: "it was not difficult to procure an old rubber shoe for the foundation of a ball. Many a dear old grandma or auntie of today will remember having stockings and mittens being begged of them, which were knit at home by hand, to be unraveled for ball

This is another instance of using an “orange” as an example of the cover

This is from Porters Spirit of the Times, Dec 27, 1856 referring to the Mass game ball.



BASE BALL.

HOW THEY PLAY THE GAME IN NEW ENGLAND.

BY AN OLD CORRESPONDENT.

BOSTON, *Dec.* 20th, 1856.

EDITOR PORTER'S SPIRIT: I have read, with some degree of interest, several articles which have from time to time appeared in the SPIRIT upon the "American Game of Base Ball." This is truly a national game, and is played by the school-boys in every country village in New England, as well as in the parks of many of our New England cities. I find, on reading an extract from the rules of the game, taken from the bye-laws, rules, &c., of the Putnam Club, and published in the SPIRIT of Dec. 6th, some matters so different as to the manner in which I myself learned and played the game from youth to manhood, that I have thought, perhaps, a statement of my experience as to the Yankee method of playing "Base," or "Round" ball, as we used to call it, may not prove uninteresting.

The ball we used was, I should think, of the size and weight described by the Putnam Club rules, made of yarn, tightly wound round a lump of cork or India rubber, and covered with smooth calf-skin in quarters (as we quarter an orange), the seams closed snugly, and not raised, lest they should blister the hands of the thrower and catcher; the bat round, varying from 3 to 3½ feet in length; a portion of a stout rake or pitchfork handle was most in demand, and wielded generally in one hand by the muscular young players at the country schools, who rivalled each other in the hearty cracks they gave the ball.

There were from six to eight players upon each side, the latter number being considered a full complement.

The two best players upon each side—first and second mates, as they were called, by common consent—were catcher and thrower. These retained their positions in the game, unless they chose to call some other player, upon their own side, to change places with them.

The following diagram will show the position of the players:

This screen shot has some misc. materials and process info, plus used as trophy

Clarence Deming, for example, recalled "the orthodox 'white' ball being used only for match games," with necessity often requiring the same ball to be brought forth for two or three matches. When a club in Rochester, New York, "ordered the first white horsehide ball, just one" from Brooklyn, it was treated with awe: "What a host of the boys came to see it and to have a kindly handling."

As soon as it became possible for a baseball to be spared, matches culminated with the losers presenting the game ball or a brand-new one to the winners. The obvious ritual undertones of this action were enhanced by the ceremony that accompanied it; as described in an account of an 1862 game, "the ball was delivered in a very manly speech [and] the customary things were said on both sides."

Yet while the ritual elements surrounding the early baseball are undeniable, it is a mistake to emphasize them at the expense of more practical ones. Although the symbolic significance of the baseball is often implicit in early accounts, it is the difficulty of replacing it that is always explicit. As had been the case with the Knickerbockers, early clubs were deeply conscious that their very existence was imperiled by the tremendous difficulty of creating or purchasing a usable ball.

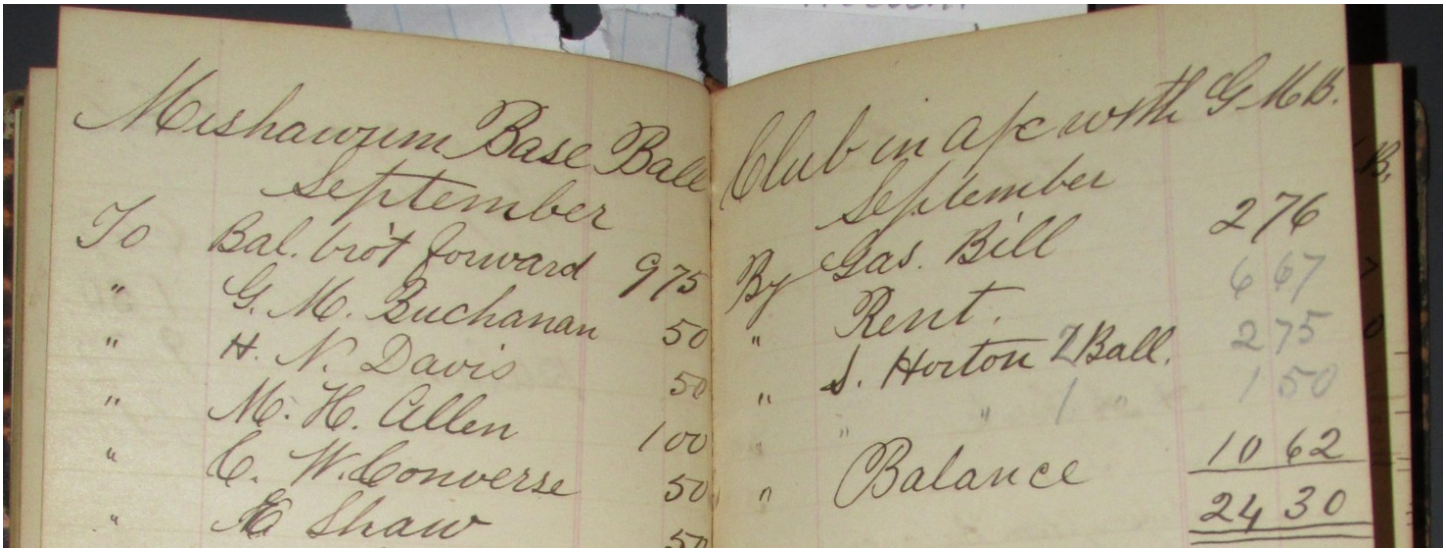
When the ball had to be created from scratch, as was the case in most parts of the country during the early days of baseball, its manufacture involved a series of tricky processes. First, rubber, yarn, and leather had to be obtained, and someone had to be found who could transform the leather into an effective cover. The scarcity of critical components and budgetary constraints made scrounging for secondhand materials common, with the result that the finished baseball was often noticeably imperfect. But these earliest baseballs were treasured all the more for the struggles that went into assembling them.

At one of the first match games ever played in San Francisco, for instance, a field had been found and the two sides arranged before someone pointed out that no suitable ball was

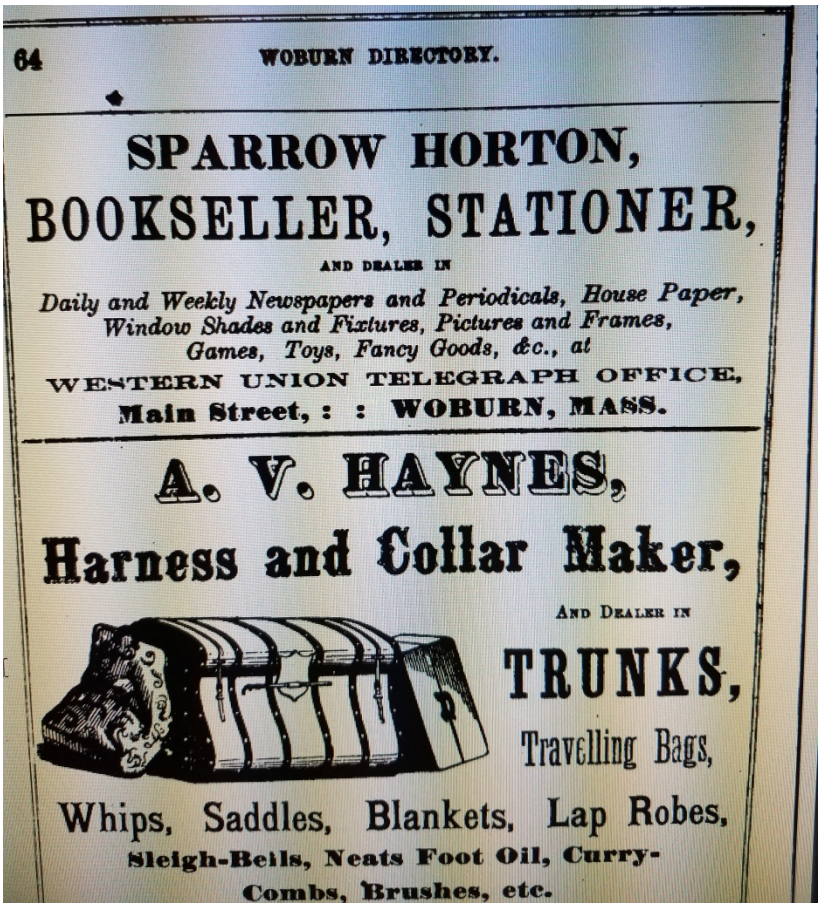
Massachusetts base balls

Info from Brian Sheehy.

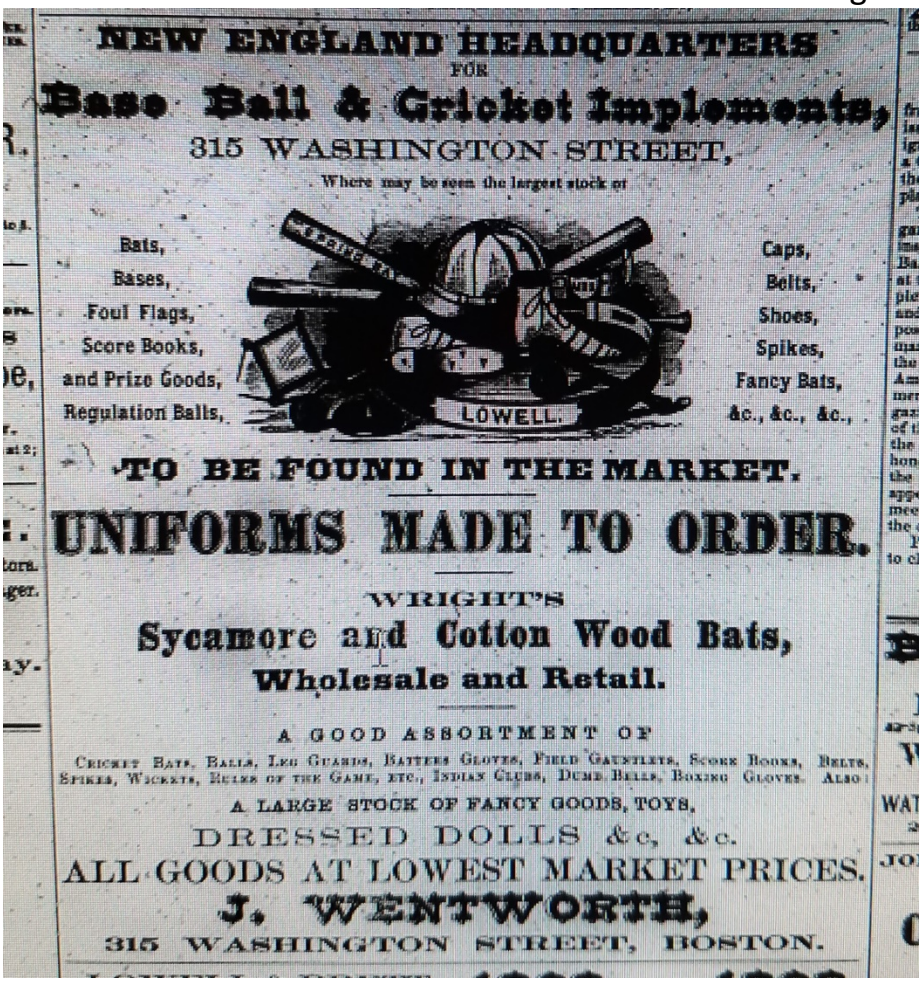
Picture 1. Scan of receipt of base ball made by S Horton. Club paid $2,75 for 2 it appears. From 1868 book records



This ad could confirm the ball maker was Sparrow Horton ? since he seems to be a jack of all trades.

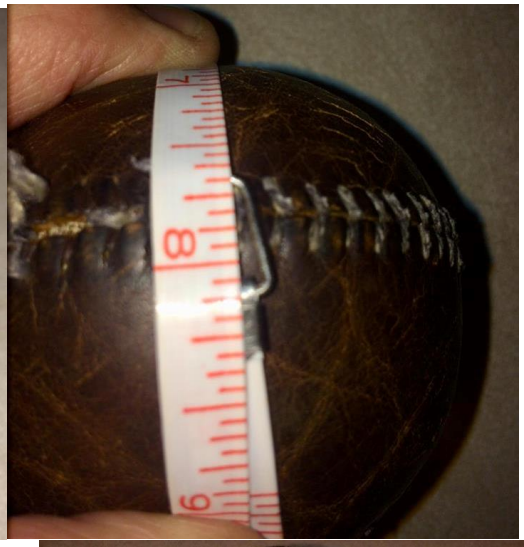


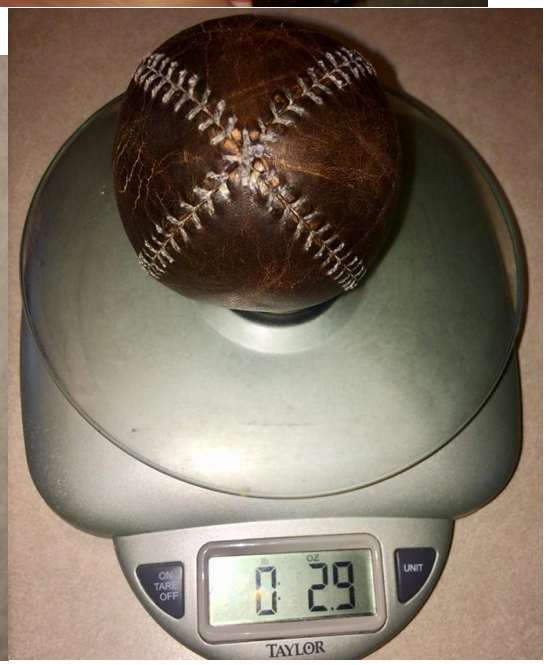
This is an ad for a sporting goods store in Boston.
J Wentworth. Did he make them.. manufacture them ? get them from someone else ?



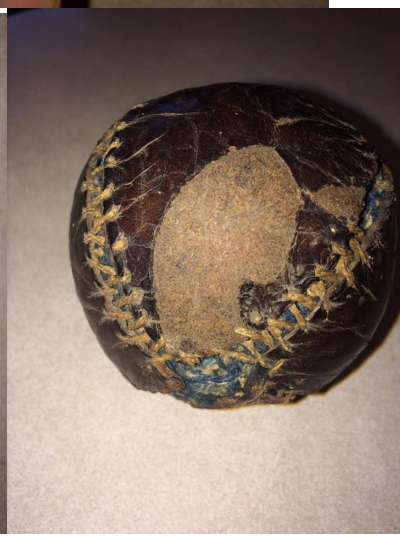
Neither Wentworth nor Horton turned up in any of the books I have gone through to this point. Need more info to track down Mass rules base balls…

Pictures of 19th century base balls, from Tracy Martin Base Ball Museum.
This is one that Tracy labels as 1850s or 1860s, Lemon Peel. Based on the size and weight, I might lean toward 1850s.





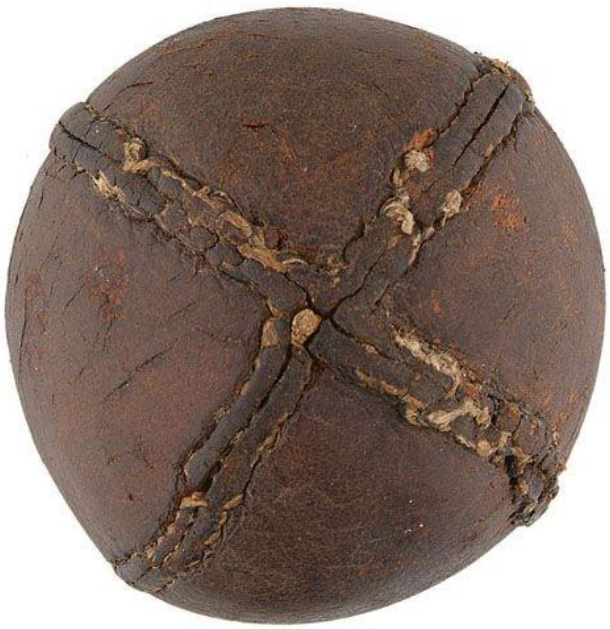
This set, from Tracy's Museum, is labeled, gusset or belt base balls. 1850s, there are 2 different base balls in this set.
This first set at only 7.5" circumference seems small, and 2.9 ounces seems light, so probably town ball or Mass ball.



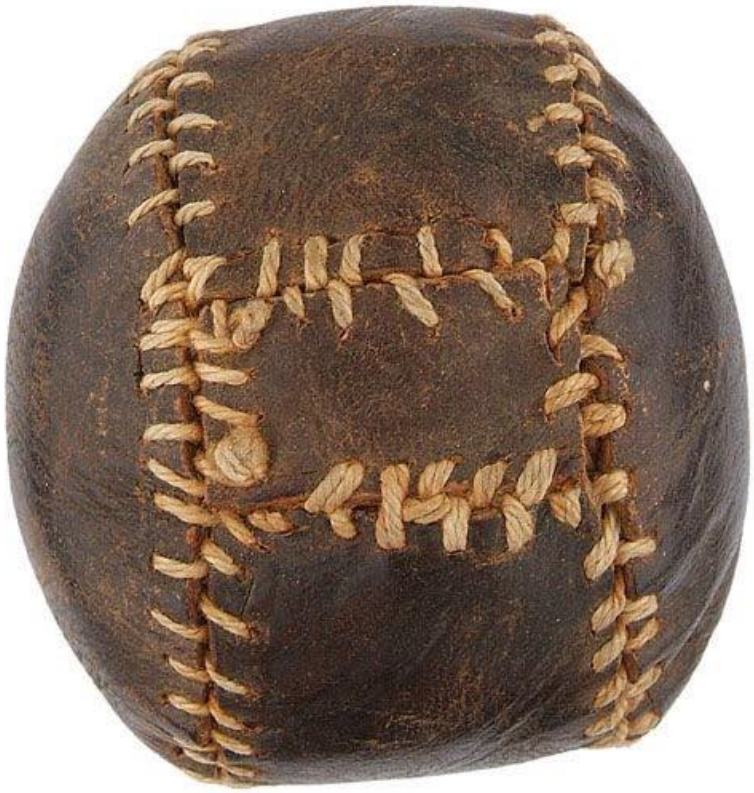
This ball, while it is stitched a bit differently, is also only 7.5” and pretty light on weight at only 2.5 ounces.
Guessing this is town ball as well, or from some other bat and ball game of the time.

Here are a bunch more from his museum page, but they are not labeled by year or style. This first one looks to have the “figure 8” style, so most likely later 1860s into 19870s.

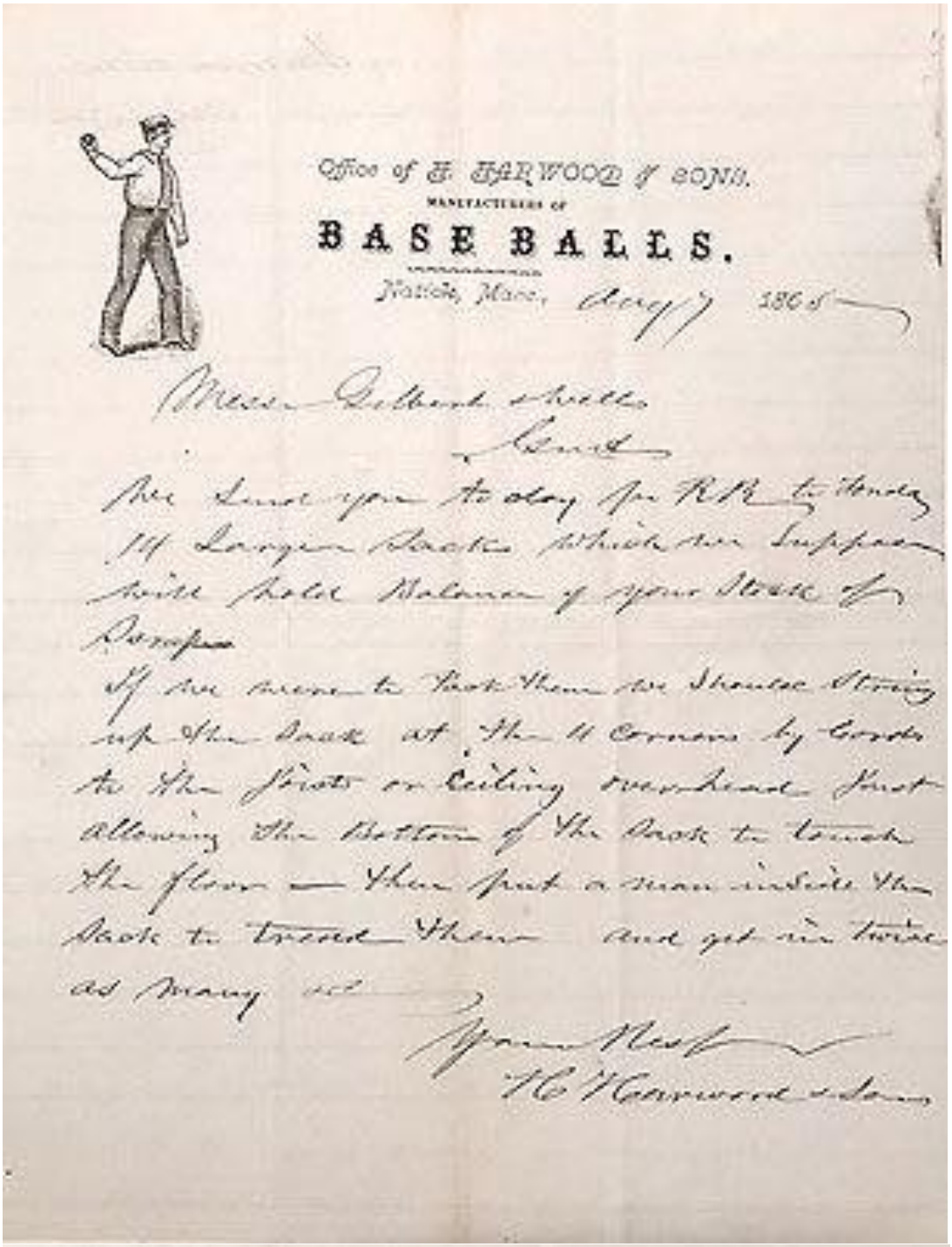
This next one is “lemon peel” or “star shape pattern” but odd stitching pattern



This one I believe if called a “belt ball”, but could have another name. Likely using up scraps of leather as the main “belt” is a bit short, and they added in another small piece to finish the belt.



This shows a note from Harwood and Sons, Manufacturer of Base Balls.



Office of H. HARWOOD & SONS.
MANUFACTURERS OF
BASE BALLS.
Natick, Mass., Aug 7 1865

Messrs Gilbert & Wells
Gent

We send you to day per R.R. to Fonda 14 Large Sacks which we suppose will hold Balance of your Stock of Scraps

If we were to Pack them we should string up the Sack at the 4 Corners by Cords to the Joists or Ceiling overhead Just allowing the Bottom of the Sack to touch the floor — then put a man inside the Sack to tread them and get in twice as many &c

Yours Resp
H. Harwood & Sons

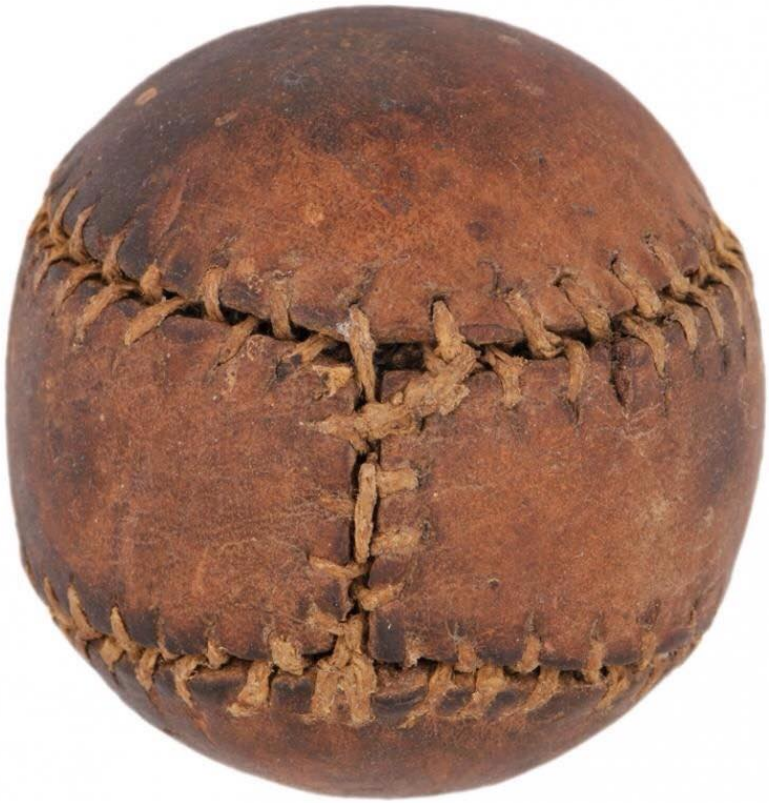
Office of H. HARWOOD & SONS,
MANUFACTURERS OF
BASE BALLS.
Natick, Mass., Aug 7 1865

This is another “lemon peel” but again, a unique style of stitching.

And another “lemon peel” that makes use of two different leathers, based on color. I cannot tell, but it could very well be 4 pieces, or 2 pieces, but leaning toward 4 based on the design. Note that only one side of the ball has the stitching showing, indicating the ball was sewn inside out on the other three, then ball put in and the last leg stitched up in “lemon peel” fashion.

Just an old beat up “lemon peel”, stitching with just a string, and appears to be some repair stitching done.

Another belt style ball, this one with the belt more intact.



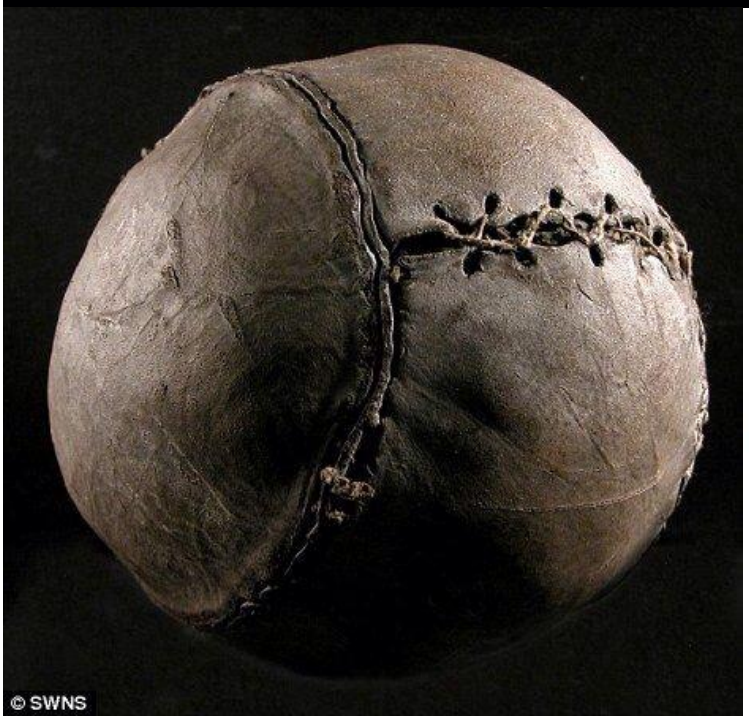
Not sure what is going on here. I can guess the inside out stitching, but all four sides are sealed, so maybe the put something over the seams ??

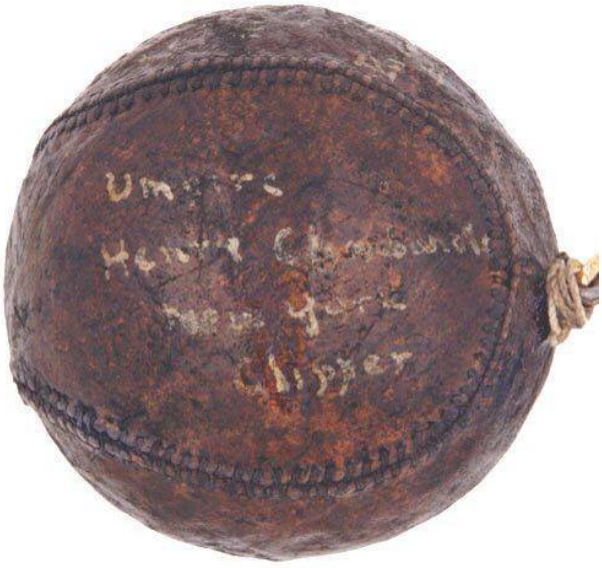
A “lemon peel” where the points didn’t quite line up, or was reworked later and just fixed enough to make it playable.

A couple “figure 8” style base balls on the top, not sure on year
A nice “lemon peel” lower left, and another “figure 8” lower right.

09.09.2009 22:00

1830's
1840-1870
1870-1900's
OFFICIAL LEAGUE
CORK CENTER
Official
National League
THE CUSHIONED CORK CENTER
SPALDING
Rawlings
★ OFFICIAL ★
MAJOR LEAGUE BASEBALL
1920's
1950-1965
1998-Present


© SWNS



SCORE BOOK
VICTOR
1860's LEMON PEEL BALL
1870's BELT STYLE BALL
1880's - 1890's FIGURE EIGHT BASEBALL'S