



## A GREAT CHANCE FOR YOU

To Save Money.

### At Our Overcoat Sale.

Overcoats for Men and Boys.

Now is the time of all times to buy an Overcoat. Plenty of Overcoat weather ahead and you'll have a fine coat to start in with next winter. 20 per cent, off any Overcoat in the House. None reserved.

Here's your Overcoat opportunity, Sir, nail it.

**LIVINGSTON'S**  
BROCK STREET

## WALDRON'S LINENS

Has been a household word for over forty years in Kingston and vicinity, and the present season has added to our reputation held for so many years for extra values in Household Linens and Cottons of the highest order.

### Beautiful pure white Irish Linen Table Cloths

In all sizes, with Napkins to match. These are all in the newest designs, and are priced at special discounts for this sale.

### 165 Pattern Cloths

Double Satin Damask, slightly imperfect, some only soiled, at about half price. A few with Napkins to match.

### Table Napkins

In all sizes, a special lot of broken dozens, mostly 1-2 dozen to a pattern, at a big reduction from regular prices.

### Remnants of Bleached and unbleached Table Linen

In lengths of 1-2 to 3-4 yards, mill ends, slightly soiled at about one-third off.

Sheetings, Pillow Cottons, Towels and Towellings, all at Sale Prices.

During January and February we close at 5 o'clock excepting Saturdays.

## R. WALDRON

### PAYING FOR THE MILK

ADDRESS OF PROF. ZUFELT AT DAIRYMEN'S CONVENTION.

Collection of Evidence Which Has a Practical Bearing on the Question—The Different Methods of Dividing Proceeds for Milk at Cheese Factories.

The following is a copy of the address delivered by Prof. L. A. Zufelt, superintendent of the Kingston Dairy School, at the Dairymen's convention, which contains a great deal of valuable information for dairymen.

The address deals with a comparison of the different methods of dividing the proceeds for milk at cheese factories, and also deals with the matter which Prof. Zufelt and Prof. H. H. Dean, of the Agricultural College, Guelph, had a lively tilt over at one of the sessions. Prof. Zufelt had his facts based on practical tests made, and he is ready to back up his report with the strongest evidence possible.

The consensus of opinion at the meeting appeared to be that Prof. Zufelt had the best of the argument. His remarks were loudly applauded.

Owing to the confusion and uncertainty which prevails in the mind of the average cheese factory patron, in regard to the proper method of paying for milk, due chiefly to the opposing views, held by our leading dairy authorities, it was deemed advisable to collect further evidence, which would have a practical bearing on this question, and enable us to judge more fully the merits of the different methods so far advocated.

At the present time we have four methods of payment before the public each with more or less of a following, viz., "Pooling," "Fat plus 2," "Fat plus Casein," and "Fat plus Casein." All our authorities, and the public generally, are agreed that the "Pooling" method is the least accurate, and that either of the other three are preferable, if we could only agree as to which of these we consider the best.

In order to be in a position to discuss intelligently the merits of these three methods I set myself the following tests:

First—As the fat and casein are the chief constituents of milk made use of in the manufacture of cheese, theoretically then, the fat and casein content of milk is a fair measure of its cheese-making properties; but, lacking the means to quickly and accurately determine the percentage of casein in milk, covering the usual period of monthly tests, and as a method of calculating the casein content based on the percentage of fat has been advocated, we undertook to find out if there was any constant relation existing between the fat and the casein.

Second—Assuming for the sake of comparison, that the fat and casein content of milk was a fair measure of its value, to find out which of the other two ("fat" and "fat plus 2" methods) was the most accurate.

Third—By manufacturing milk of varying fat and casein content into cheese to determine which of the three methods came nearest to the actual weight of cheese made.

In carrying out of this work, arrangements were made with the makers of Sunbury and Elm Grove cheeses, factories, to analyze composite samples of the milk supplied by their patrons, which samples were subsequently tested for casein at the chemical laboratory, at Queen's, and for fat at the dairy school.

Charts presented give, in a tabulated form, the result of this work, together with the comparative values of the individual milks, estimated by the three methods under discussion.

In addition to the percentages of fat and casein, we also have tabulated the difference per 100 pounds between the "fat" and "fat plus 2" methods, as compared with the "fat plus casein" method, for the various months for which tests were made.

These tests represent the percentage of fat and casein in the milk for the entire month.

In examining the tests for both factories, it will be noticed, from the extreme variation of casein, in milks having the same fat content, that no constant relation exists between the individual patrons, but on the contrary, the casein shows a greater variation than does the fat, and this invariably favors slightly the milk having a high fat content, whilst on the other hand the "fat plus 2" method gives the low testing milk a greater value than it really has. This is more fully brought out in another table, which represents a summary of all the tests made at the dairy school up to date.

In compiling this table the average was taken of the casein content of all the milks testing 3 per cent. fat, 3.2 per cent, and so on up to 4 per cent, representing altogether, 444 different samples.

A further examination of this table, reveals the fact that the "fat" method of payment shows a difference of only 1.5 cts. per 100 lbs. of milk, and the "fat plus 2" method a difference of 2.2 cts. when compared with the "fat plus casein" method. Further the "fat plus 2" method on an average, gives the 3 per cent. milk 5.0 cts. per 100 lbs. more, and the 4 per cent. milk 5.1 cts. less than their actual value, whilst the "fat" method gives the 3 per cent. milk 1.8 cts. less, and the 4 per cent. milk .7 cts. more.

Thus far the evidence collected points to the "fat" method as being more nearly accurate than the "fat plus 2."

We will now turn to the third line of investigation and see how the three methods of payment compare with the actual yield of cheese.

Equal quantities (from 225 to 250 lbs.) of different milks, having varying percentages of fat were taken and placed into separate vats, also an equal weight was placed in a third vat made up of equal parts of the milks used in the former two vats. The three lots were then made into cheese under the supervision of Mr. Echlin, who was instructed to make as fine a quality of cheese as the character of the milk would permit. The following table gives the result of this work.

The second or centre lot represents the vat containing equal quantities of the first and third in each series of experiments, the cheese were weighed when ten days old, and then paraffined. The table here presented gives in detail the weight of milk, percentage of fat and casein, weight of cheese, value of the milk estimated by the three methods and the difference found between these methods and the actual value as estimated from the cheese. Altogether thirty vats containing 10,275 lbs. of milk were thus made into cheese.

Taking the last three columns, we see the total difference per 100 lbs. of milk, of each of the three methods, is as follows, ranked in order of merit:—Fat plus casein method, 1.16 cts.; fat method, 1.23 cts.; fat plus 2 method, 1.75 cts.

Here again, we see that the "fat" method is much nearer being correct than the "fat plus 2" whilst when compared with the "fat plus casein" method, there is only .12 or 1-8 cts. difference per cwt. of milk.

Up to this point, we have not considered what effect the fat and casein content of milk may have on the quality of the cheese, and we may now properly turn to this phase of the question.

During the early part of last August, G. G. Puhlow, and his assistant, Mr. Singleton, conducted a series of investigations, at the Dairy School. Part of this work consisted of making into cheese, milks of high and low fat content. A table gives the result.

Here again, we get practically the same results as indicated in our previous work, the difference per cwt. of milk being three-quarters of a cent, for the "fat" and one and one-third cents for the "fat plus 2," when compared with the "fat plus casein" method of payment.

In addition we also studied the effect on the quality of the cheese, analysis of which is also here shown.

From a study of this analysis, which is typical of cheese made from rich and poor milks, it is seen that the cheese made from the richer milk has 3.8 more nourishing substance than the cheese made from the poorer milk; or in other words, one pound or sixteen ounces of the cheese made from the poorer milk has only as much nourishing matter as fifteen and a half ounces of the other.

It is also a well recognized fact that cheese having a high fat content has much better keeping qualities, shows less shrinkage in weight, is much more edible and more desirable in every way than one of a lower fat content.

From a careful study of the data here presented it will be found:—The "fat" and "fat plus Casein" method approaches more nearly the actual value of the milk, than the "fat plus 2" method when quality alone is considered.

Second—That the difference between the "fat" and "fat plus Casein" methods is so small that it seems hardly worth while to incur the extra expense of installing and operating a casein tester, and thereby complicating matters still more to adjust this small amount. This is especially true when the question of quality is taken into consideration, which, if done, would undoubtedly make the "fat" as nearly accurate as any method that could be devised.

**THE LAW ASSOCIATION.**

John L. Whiting, K.C., Was Elected President.

The Frontenac Law Association held its annual meeting at the office of the vice-president, J. L. Whiting, K.C., on Monday afternoon, when a large number of the members were present.

Since the association last met a number of the most active members have left the ranks, among them being John McE. Mowat, who is now in Vancouver; the late R. V. Rogers, K.C., who has passed away; Donald M. McIntyre, K.C., who was appointed chairman of the Ontario Railway Commission; and John McIntyre, K.C., who has been the president for some years, having resigned. Under these conditions it was thought wise to double the present fee, so to keep the library up to its present high standard.

The report of the different committees went to show that the association is in a prosperous condition.

The secretary read communication from John McIntyre, who has acted in the capacity of president of that association, the appointment of Justice Britton to the bench, in which he tendered his resignation. The association was indeed very sorry to lose the services of Mr. McIntyre, and an appreciative resolution concerning his services was passed.

The election of officers took place, as follows: President, J. L. Whiting, K.C.; vice-president, J. B. Walkem, K.C.; secretary-treasurer, T. M. Asselstine.

Francis King was elected trustee in place of John McIntyre, and T. J. Rigney was appointed to the library committee in place of Donald M. McIntyre.

**TWENTY-FIVE YEARS AGO.**

What Happened in Kingston and Elsewhere in 1887.

The City Council is composed of the following: Mayor, J. L. Thompson; aldermen, Muckleston, Harty, Gilder, sleeve, Wilson, Fenwick, Swift, Redden, Polson, Minnes, Phelan, Gaskin, Miller, Wilmut, McCannnon, W. Robinson, C. Robinson, McIntyre, Adams, Hisscock, Dunlop, Shannon.

A band of boys were in police court, charged with constancy on the street. They were reprimanded and given a chance.

A change has been made in working hours at the hosiery mill. The old time began at 6:30 a.m. and ended at 6:30 p.m. The new time commences at 7 a.m. and concludes at 6 p.m.

"Dry cough syrup," at Gilson's.

### WITH THE CURLERS

THEIR WILL BE A BUSY TIME THIS WEEK.

Ladies' Bonspiel Opens on Wednesday—The District League Games Open on Tuesday Evening.

The Central Ontario Curling league will open at Kingston and Brockville on Tuesday evening. Four rinks are billed to play here this evening in the senior and junior series. The following players will represent Kingston: Senior—J. McQuham, R. J. McKelvey, A. W. McLean, E. O. Silter, skip.

W. P. Hedley, F. Waugh, G. E. Searle, W. R. Sills, skip.

Junior—J. McDonald, G. Hanson, G. Smythe, S. S. Corbett, skip.

A. Aykroyd, C. Sleeth, E. R. Beckwith, R. N. McFarlane, skip.

The Ontario tankard games are to be played in the city, on January 21st, when six outside clubs will be represented.

The week following the District cup games will be played and some nine outside clubs will be represented, making seventy-two players in the game.

**The Ladies' Bonspiel.**

The Kingston Ladies' Curling club bonspiel will open at the rink, on Wednesday afternoon, at three o'clock. The outside teams that have accepted the invitation will arrive in the city on Tuesday afternoon and Wednesday morning. The bonspiel will last three days and the ladies are looking forward to a big time. T. M. Asselstine, secretary of the Kingston Curling club, will act in the capacity of official referee, and his comrades say they are not jealous of him.

**Curling Club Matches.**

The following curling club matches were played on Monday evening:

Skip J. Marshall won from skip, P. Lyman, by a score of 10 to 8; Skip J. Asselstine won from George Hanson by 13 to 8.

In the Whig trophy series skip W. R. Sills won from Skip D. Sutherland by a score of 12 to 8.

In the afternoon three club games were played. Skip H. Macpherson won from Skip M. B. Baker by a score of 15 to 10; Skip A. E. Ross won from W. R. Givens by a score of 10 to 9; Skip Leslie won from Skip G. E. Hague by a score of 14 to 11.

**Peterboro's Good Team.**

The colored boy, Kelly, of Peterboro hockey team, captured the Kingston fans and was dubbed the "whitest man on the ice." His fast, clean play and his "stick-to-it" manner well deserved the praise of the spectators. An incident which drew attention particularly, was when he collided with Larush, and then tried to save him from falling, before he made off after the rubber again. Peterboro has a good seven, who average 150 pounds, in weight, as against Frontenac's 135.

**Lady Curlers Here.**

Thirteen ladies arrived in the city, from Montreal, Tuesday noon, for the bonspiel. They were Mrs. A. F. Reid, Mrs. Jacques, Mrs. E. Heath, Mrs. Scott, of the Heather Club; and Mrs. Grant, Mrs. Hare, Mrs. Walker, Mrs. Nash, Miss Desbarats, Miss Dawlings, Miss Glasco, Miss Evans, and Miss Ward, of the Montreal Club. Peterboro, Toronto, and the other ladies will arrive on Wednesday morning.

The playing begins at 3.30 o'clock on Wednesday afternoon. The skips of the men's clubs have donated the first prize, a handsome silver bowl.

The donors of the "consolation" prizes, which are silver shields, are the lady skippers, Mrs. E. Heath, Mrs. Scott, which will commence on Thursday morning, a silver cup is the prize. It has been put up by the local lady curlers.

**No City League Game.**

The City Hockey League opening games, between Portsmouth and Queen's, and K.C.I. and Tecumsehs, which were to have been played at Queen's rink, on Tuesday evening, will not come off, as there will be no ice.

**Suffered From Grippe.**

Harvey Sproule, of Toronto, who refereed the Peterboro-Frontenac game on Monday night, got up from his bed to come to Kingston. He was suffering from a bad attack of grippe and, on Sunday, his temperature, was 102 degrees. Under the circumstances, he handled the game very fairly.

**Invitation Extended.**

The Engineering Society of Queen's University, extends an invitation to all engineers in the city, to attend a lecture on "The Panama Canal," given by C. R. Coutlee in Fleming Hall, Friday, Jan. 17th at 4 p.m.

Great bargains at Dutton's sale: Sizes 8 to 10, 95c; 11 to 5, \$1. These are extra strong boys' boots. 209 Princess street.

A sneak thief made his second visit to the undertaking rooms of S. S. Corbett, Princess street, and made off with a gold-fish out of the large bowl of water.

Florida grape fruit, Tangerines and sweet oranges, at Carnovak's.

The local union of Christian Endeavor is to meet on Tuesday evening to make final arrangements for the quarterly rally which is to be held on January 27th.

## Hood's Sarsaparilla

Cures all humors, catarrh and rheumatism, relieves that tired feeling, restores the appetite, cures paleness, nervousness, builds up the whole system. Accept no substitute, insist on having Hood's Sarsaparilla. Get it today.



## 35c a Pair Women's Plain Cashmere Stockings

The noted resistable brand, extra quality Cashmere Yarns, medium weight, spliced toe, heel and sole. Size 8 1-2, 9, 9 1-2, 10 inch.

35c Pair or 3 for \$1.

Dependable Hosiery. Priced Much Less Than Usual

Women's Hosiery, Hosiery for Girls, Hosiery for Boys, Fine Silk and Wool Hosiery for Babies. Sox for Men in Plain or Ribbed Cashmere And in Wool.

## Children's Comfortable Underwear

Natural Wool Vests and Drawers, all wanted sizes, from 1 year up to 18 years, for 20c, 23c, 25c, 30c up to 60c, according to quality, also Children's White Unshrinkable Underwear in all wanted sizes.

Children's Sleeping Suits, A Combination Suit, with feet attached, properly made, and a good quality material used. Only 43c to 75c.

John Laidlaw & Son

## MOCCASINS! MOCCASINS!

### Buckskin and Oil Tan.

Boys' Buckskin, good quality \$1.00  
Boys' Oil Tan Moccasins, \$1.50 and \$2  
Moccasins for Girls at 75c  
Moccasins for Ladies at \$1.00 and \$1.25  
Moccasins for Men at \$1.50, \$2 and \$3

The Lockett Shoe Store