



CANADA

DEPARTMENT OF FINANCE

REPORT

of the

MASTER OF THE ROYAL CANADIAN MINT

For the Calendar Year

1948

Published by Authority of Hon. D. C. ABBOTT, M.P.,
Minister of Finance

OTTAWA
EDMOND CLOUTIER, C.M.G., B.A., L.Ph.,
PRINTER TO THE KING'S MOST EXCELLENT MAJESTY
CONTROLLER OF STATIONERY

1949

ROYAL CANADIAN MINT

OTTAWA, ONTARIO.

The Honourable,
The Minister of Finance,
OTTAWA, Ontario.

SIR:
I have the honour to submit the following report on the operations of the Royal Canadian Mint during the calendar year 1948.

ADMINISTRATIVE AND MINT OFFICE
Chief Administrative Officer - A. P. Williams

COINAGE

There was an increase of \$2,216,456 in the amount of coin issued during 1948 as compared with the previous year. A detailed statement of the issues by denominations for the years 1947 and 1948 is set out below:—

Denomination	Coin issued in			
	1947	1948		1948 Total
		Dated 1947	Dated 1948	
	\$	\$	\$	\$
SILVER COIN—				
1 dollar.....	67,000.00	21,876.00	8,080.00	29,956.00
50 cents.....	278,000.00	30,242.00	17,758.00	48,000.00
25 cents.....	397,000.00	1,099,038.75	632,961.25	1,732,000.00
10 cents.....	444,000.00	983,424.20	36,575.80	1,020,000.00
Total Silver.....	1,186,000.00	2,134,580.95	695,375.05	2,829,956.00
NICKEL COIN—				
5 cents.....	391,000.00	525,076.60	90,423.40	615,500.00
BRONZE COIN—				
1 cent.....	360,300.00	452,296.05	256,003.95	708,300.00
		3,111,953.60	1,041,802.40	4,153,756.00
TOTAL.....	1,937,300.00	\$4,153,756.00		
Representing.....		Number of Pieces		
		70,043,894	30,350,062	
TOTALS.....	50,501,000	100,393,956		100,393,956

Distribution of the coin issued to the various Agencies of the Bank of Canada was as follows:—

—	Silver				Nickel	Bronze
	Dollar	50 Cents	25 Cents	10 Cents	5 Cents	1 Cent
	\$	\$	\$	\$	\$	\$
Calgary.....		2,000	162,000	92,000	46,000	54,000
Charlottetown.....						
Halifax.....		6,000	86,000	44,000	24,000	20,500
Montreal.....	6,000	4,000	304,000	210,000	160,000	183,700
Ottawa.....	13,956	10,000	92,000	54,000	28,000	24,300
Regina.....		8,000	158,000	102,000	30,500	43,000
St. John.....			48,000	42,000	20,000	6,000
Toronto.....	6,000	14,000	594,000	344,000	219,000	251,500
Vancouver.....	2,000	2,000	76,000	82,000	39,000	64,600
Winnipeg.....	2,000	2,000	212,000	50,000	49,000	60,700
Total.....	29,956	48,000	1,732,000	1,020,000	615,500	708,300

Worn and mutilated coin withdrawn from circulation:—

—	Withdrawn	Net Increase in Circulation
	\$	\$
Silver Coin.....	50,301.75	2,779,654.25
Nickel Coin—5 cents (mutilated only).....	1,062.15	614,437.85
Tombac Coin—5 cents.....	138,930.05	.....
Steel Coin—5 cents.....	438.25	.....
Bronze Coin.....	2,406.41	705,893.59

GOLD BULLION

Four thousand seven hundred and thirteen deposits of gold bullion were received at the Mint during the year from Canadian Mining Companies, the Dominion of Canada Assay Office, Vancouver, and sundry persons. The gross weight of the deposits amounted to 4,252,389 ounces, containing by assay 3,401,991 ounces fine gold and 504,369 ounces fine silver. The receipts show an increase as compared with the year 1947 of 482 in the number of deposits, gross weight 692,892 ounces, gold content 533,522 ounces and fine silver 92,740 ounces.

The net amount paid by cheque to depositors was \$115,020,002.50. In addition 14,716.011 ounces of fine gold with a statutory value of \$304,207.38 was also issued in payment of gold deposits.

Postage collected for the Postmaster General on deposits shipped by mail, postage collect, amounted to \$25,764.00.

Details of the origin of the bullion deposited at Vancouver and Ottawa are shown in the following table:

Source	Gross Weight	Fine Gold	Fine Silver
	Ounces	Ounces	Ounces
From Canadian Mines and Refineries—			
Ontario.....	2,581,418.609	2,092,486.019	294,693.23
Quebec.....	1,073,891.150	868,557.978	123,665.17
British Columbia.....	239,507.570	179,085.529	36,406.81
Manitoba.....	102,365.925	79,811.495	8,622.52
Yukon.....	76,047.525	60,605.961	12,421.31
Nova Scotia.....	203.575	188.484	7.98
North West Territories.....	143,274.940	101,475.956	25,283.75
Alberta and Saskatchewan.....	111.370	81.636	7.35
Total from Mines and Refineries...	4,216,820.664	3,382,293.058	501,108.12
From Jewellery and Scrap.....	37,877.320	20,320.631	3,419.93
GRAND TOTAL.....	4,254,697.984	3,402,613.689	504,528.05

The following table shows the disposition of the fine gold produced in various forms (trade bars, granulated gold, sweep, medals, etc.):—

	Ounces Fine
8,195 Trade Bars transferred to Exchange Fund Account of Minister of Finance and held in safe-keeping by Bank of Canada.....	3,277,758.706
Depositors—granulated.....	14,716.011
Sales to Manufacturers—granulated.....	108,659.045
Proof Plate for assay purposes.....	2.500
Medals.....	4.862
Sweep.....	3,932.211
	3,405,073.335

This total shows an increase of 545,989.117 ounces fine as compared with the year 1947.

COINAGE AND MEDAL DEPARTMENT

Chief: R. J. EDMUNDS

The production* of coins in 1948 again nearly reached the hundred million mark, over double the output of the previous year, and approximated closely to the unprecedented heavy demands made upon this department for coins during the War Years.

Contemporaneously with the increased work of coinage, it was necessary to strike a considerable number of medals, campaign stars, clasps and overseas bars for the various services on behalf of the Department of National Defence.

*It will be noted that the actual production of coins in any given year may differ slightly from the number of coins issued for circulation during the year. There is usually a small but varying number of coins held in stock at year end.

This emergency compelled recourse to the employment of additional craftsmen and to the expedient of operating the machinery for double the normal hours daily from January to August, and on three shifts to the end of the year.

The Medal Branch was in continuous operation on one shift throughout the year finishing, assembling, inspecting and packing war medals, campaign stars, and overseas bars.

Consequent on the change in the King's titles the inscription on the obverse of Canadian coins was revised during 1948. The words and abbreviations D:G: REX ET IND: IMP: were deleted and the following substituted: "DEI GRATIA REX".

All coins dated 1948 were required to be struck with the new inscription. The master dies and working punches were not ready until late in the year. To meet the demand early in the year all coins bore the date 1947 with a small finely executed maple leaf after the "7", to indicate that such coins were struck in 1948, but without the new title could not be so dated.

The number of good coins of all denominations produced during 1947 and 1948, and the number of war medals, campaign stars, etc., assembled and packed ready for issue, are shown on the two following comparative tables:—

COINAGE

—	1947	1948
	Pieces	Pieces
DOMINION OF CANADA		
SILVER (800 fine)—		
1 dollar.....	65,595	39,915
50 cents.....	424,885	76,217
25 cents.....	1,524,554	6,958,362
10 cents.....	4,431,926	10,061,534
NICKEL (pure)—		
5 cents.....	7,603,724	11,405,913
BRONZE—		
1 cent.....	31,093,901	69,623,227
Total Canadian.....	45,144,585	98,165,168
NEWFOUNDLAND		
SILVER (800 fine)—		
10 cents.....	119,736	.....
5 cents.....	310,750	.....
BRONZE—		
1 cent.....	313,772	.....
Total Newfoundland.....	744,258	.....
Total Canadian and Newfoundland.....	45,888,843	98,165,168

MEDALS AND CAMPAIGN STARS

Description	1947	1948
Canadian Volunteer Service Medals—		
800 and 925 fine silver.....	258,100	158,700
Clasps to Canadian Volunteer Service Medals—		
800 and 925 fine silver.....	364,095	150,021
Overseas Bars to Canadian Volunteer Service Medals—		
800 and 925 fine silver.....	218,050	127,500
CAMPAIGN STARS (Bronze)—		
1939-45.....	92,868	107,132
France and Germany.....	68,905	91,095
Italy.....	33,602	73,898
Atlantic.....	40,319	
Aircrew Europe.....	12,306	
Africa.....	4,135	7,865
Burma.....	5,745	
Pacific.....	8,456	
	266,336	279,990
SECOND AWARD BARS TO CAMPAIGN STARS—		
Battle of Britain.....	59	
Atlantic.....	8,839	
Aircrew Europe.....	1,009	
North Africa.....	4,084	
Pacific.....	999	
Burma.....	934	
France and Germany.....	10,009	
	25,933	

The number of coins of each denomination struck in 1948 bearing the date 1947 and distinguishing maple leaf are as follows:

1 dollar.....	21,135	10 cents.....	9,638,793
50 cents.....	38,433	5 cents.....	9,595,124
25 cents.....	4,393,938	1 cent.....	43,855,448

Details of the weights of silver bullion and copper metal cast into coinage bars, bars rolled, blanks cut and good coins produced are summarized in the following table:—

COINAGE

—	Bars Cast	Bars Rolled	Blanks Cut	Good Coin Produced
CANADA	Ounces	Ounces	Ounces	Ounces
SILVER (800 fine)—				
1 dollar.....	97,461.40	100,023.50	46,332.78	29,946.14
50 cents.....				28,577.53
25 cents.....	2,236,552.00	2,908,775.40	1,443,681.92	1,303,333.93
10 cents.....	1,328,195.80	1,224,709.20	787,057.55	754,748.46
Total Silver.....	3,662,209.20	4,233,508.10	2,277,072.25	2,116,606.06
NICKEL—	Pounds	Pounds	Pounds	Pounds
5 cents.....				114,421.12
BRONZE—				
1 cent.....	754,102.50	760,516.59	508,200.00	496,363.00
	Short Tons	Short Tons	Short Tons	Short Tons
	502.6	525.4	332.2	378.0

MEDALS

—	Bars Cast	Bars Rolled	Blanks Cut	Finished Medals, etc.
CANADA	Ounces	Ounces	Ounces	Ounces
SILVER (800 and 925 fine)—				
Canadian Volunteer Service Medals.....	399,103.70	441,139.30	199,952.55	158,700.00
Clasps.....	152,296.31	152,296.31	46,733.98	24,003.36
Overseas Bars.....				8,925.00
	551,400.01	593,435.61	246,686.53	191,628.36
CAMPAIGN STARS—	Pounds	Pounds	Pounds	Pounds
4 Stars.....	49,236.50	59,080.29	19,074.95	12,039.56
	Short Tons	Short Tons	Short Tons	Short Tons
	43.5	49.9	18.0	12.6

Melting House:

In addition to the 546.1 tons of silver and bronze bars melted for coinage and medals, there were 40,109.19 ounces of worn and mutilated silver coins redeemed and cast into ingots for conversion in 800 standard coinage bars; 82,320,000 tombac five-cent pieces weighing 82,320.00 pounds, and 2,663.67 pounds of worn and mutilated one-cent pieces melted for one-cent coinage.

Rolling Room:

Extra rolling consisted of the following:—

- (1) 3,087 ounces of fine silver, 39 ounces fine silver proof-plate for the Assay Office;
- (2) 187 ounces of pure copper, 1,810 pounds of lead for the Assay Office; in addition to the 575.3 tons of silver and bronze fillets gauged to the thickness of the various denominations of coins, and for medals, campaign stars, clasps and overseas bars.

Press Room:

The number of dies used for each denomination and the average production of coins per pair of dies for the years 1947 and 1948 are shown in the table below:—

Denomination	1947			1948					
	Number of Good Pieces Coined	Number of Dies Used		Pieces per Pair of Dies	Number of Good Pieces Coined	Number of Dies Used		Pieces per Pair of Dies	
		Obv.	Rev.			Obv.	Rev.		
Dollar.....	65,595	11	17	4,685	39,915	9	6	5,322	
50 cents.....	424,885	8	5	65,367	76,217	3	3	25,406	
25 cents.....	1,524,554	32	29	49,985	6,958,362	189	247	31,919	
10 cents.....	4,431,926	136	111	35,886	10,061,534	240	223	43,462	
5 cents.....	7,603,724	99	93	79,205	11,405,913	120	144	86,408	
1 cent.....	31,093,901	175	134	201,255	69,623,227	204	144	400,133	
	45,144,585	461	389		98,165,168	765	767		
	Average per pair of dies.....106,222			Average per pair of dies..... 128,153					

In conjunction with the seven coining presses, two drop-hammers and two friction-presses were kept in continuous operation striking Campaign Stars, Medals, Clasps and Overseas Bars.

Die and Medal Branch:

The total numbers of matrices, punches and dies engraved and prepared for coinage and medal work are shown below:—

	Obverse	Reverse
For Coinage, Matrices, Punches, Dies.....	923	964
For Medals, Campaign Star Dies.....	8	0
War, 1939/45 Dies.....	29	45
Defence of Britain Dies.....	87	99
Canadian Volunteer Service.....	59	73
Clasp Dies for C.V.S.M.....	8	10
Clasp Dies for War and Defence of Britain Medals.....	34	39
Overseas Bar Dies.....	13	12
Royal Canadian Mounted Police Dies.....	6	0
Governor-General's Medal Dies.....	1	1

Master Dies and Working Punches for the obverse of all denominations from the 1 cent to the \$1.00 were prepared at the Royal Mint, London, with the new inscription of His Majesty's title to be used in 1948 and subsequent years.

The inscription relating to the Royal Style and Title on the obverse of the Royal Canadian Mounted Police Medal was changed in accordance with the regulations, and a new master die was engraved by the Mint Engraver with the legend "GEORGIUS VI DEI GRATIA REX".

A master die for the clasps of the Defence of Britain and War Medals was also hand engraved by the Mint Engraver.

Seventy-nine R.C.M.P. Long Service and Good Conduct Medals were struck in 800 standard silver instead of fine silver, each mounted with clasp, and issued to the Commissioner of the Royal Canadian Mounted Police. The name of the recipient was engraved on the edge of each medal.

Two hundred and three Bronze Medals, 65 silver (800 standard) and 8 Gold Medals (silver gilt) 2-1/16" diameter were struck on the request of His Excellency the Viscount Alexander of Tunis, as the Governor-General's award to students of Canadian Universities attaining the highest academic standing.

In addition to the above the following gold and bronze medals were struck on behalf of various Institutes and Societies.

Professional Institute of the Civil Service of Canada—

One 14-carat gold, 2" diameter engraved with the name of E. W. Griffith, 1948.

Engineering Institute of Canada—10-carat gold medals—

One Gzowski Medal, engraved E. A. Allcut, 1947.

One Keefer Medal, engraved E. P. Muntz, 1947.

One Plummer Medal, engraved E. P. T. Bailey, 1947.

One Ross Medal, engraved J. A. Ouimet, 1947.

One Leonard Medal, engraved G. S. Hume, 1947.

One Julian C. Smith Medal, bronze, engraved Philip Louis Pratley.

One Julian C. Smith Medal, bronze, engraved Penrose Melvin Sauder.

Royal Society of Canada—

One Flavelle Medal, 14 carat, engraved Margaret Newton, 1948.

One Tyrrell Medal, fine gold, engraved Lionel Groulx, 1948.

Webster Memorial Trophy Competition—

One Good Airmanship Medal, bronze, engraved John H. Blackburn, 1948.

The Master Dies and Punches for the Defence of Britain Medal and the 1939/45 War Medal were received from the Royal Mint, London, during the current year. Arrangements were made immediately on the receipt of these dies to proceed with the manufacture of the War and Defence Medals, and clasps. The design of the Defence of Britain Medal shows, on the obverse: Uncrowned effigy of His Majesty with the inscription GEORGIUS VI D: G: BR: OMN: REX F: D: IND: IMP; on the reverse: The Imperial Crown over an oak tree defended by a lion and lioness, with the inscription "1939-1945" and "The Defence Medal". The artists are Mr. Henry Paget for the obverse and Mr. W. Parker for the reverse. The designs have been modelled in low relief to allow the medal to be struck on a coining press. The medal ribbon is attached by means of a plain bar with fixed clamp. Diameter of medal 1.42" diameter, struck in 800 standard silver. The ribbon is flame-coloured in the centre, and the edges are green; it has two black stripes.

The design of the "1939-1945" War Medal bears on the obverse: the Royal Effigy, crowned, with the inscription, GEORGIUS VI D: G: BR: OMN: REX ET INDIAE IMP; by the artist, Mr. Percy Metcalfe, and on the reverse: a lion standing wanton on the body of a double headed dragon, the two heads, an eagle's

and a dragon's, signify respectively the principal occidental and oriental enemies. The reverse was designed and modelled by Mr. E. Carter Preston. The War Medal has the same type of clasp as the Defence Medal, of the same diameter and metal. The ribbon is red, white and blue colours, with narrow red stripe on white in the centre.

Mechanical and Electrical Branch:

With the continuous operation of the Coining Division on two and three shifts, the work of maintaining the machinery in good running order has become increasingly difficult, and was accomplished only by the ingenuity displayed by an efficient mechanical and electrical staff.

New devices of many kinds had to be designed and machined to provide the Medal Branch with tools to cut, trim, swedge and process the clasps and medals at a rapid pace. Many labour saving mechanical and electrical devices were designed and made with resultant economy of labour and cost, and effected definitely a speeding up of the output of medals and clasps.

In addition to the increased work on new installations, repairs, and maintenance due to the extended rush of coin and medal production, important research and development work was carried on in the field of High Frequency Induction and Dielectric Heating. Plans were completed and the construction of a model plant commenced, to endeavour to improve the present methods of annealing coin blanks.

A plating plant was designed, built and put into service for electro-plating copper and nickel on plaster cast models.

ASSAY DIVISION

Chief: W. A. HAWKEY

The number of assays made in the Department from January 1 to December 31, 1948, was as follows:—

GOLD—	
Refinages.....	5,075
Rough Gold.....	26,352
Proof.....	2,762
Parting Proofs.....	727
Parting Buttons.....	9,742
Miscellaneous.....	1,376
	46,034
SILVER—	
Standard Bars.....	3,794
Medal Bars.....	595
Pyx.....	1,197
Fine Silver.....	770
Worn Coin Ingots.....	102
Proof.....	1,039
Miscellaneous.....	54
	7,551
MISCELLANEOUS—	
Mint Residues (Sweeps, etc.).....	530
For the Marking Act Inspector.....	81
Nickel, Copper, etc.....	86
	697
Total.....	54,282

The Mean Finenesses of the Silver Coinage struck in 1948 were as follows:—

Denomination	Standard Fineness	Mean Fineness
1 dollar.....	800·00	800·28
50 cents.....	800·00	799·24
25 cents.....	800·00	799·44
10 cents.....	800·00	799·54

During the year under review, 4,713 deposits were received in the Mint. The gross weight of this bullion was 4,252,389·454 oz. troy, and was comprised of the following:—

FINE GOLD—

285 deposits weighing 623,557·984 oz. of a mean fineness of 996·531.

CRUDE BULLION—

3,911 deposits; 3,486,627·150 oz. of an average fineness of 767·005 gold, 149·365 silver and containing 8·363% base metal.

SCRAP (Jewellery and Dental)—

319 deposits weighing 34,289·050 oz. of an average fineness of 545·123 gold and 94·300 silver.

FROM VANCOUVER ASSAY OFFICE—

198 ingots; 107,915·270 oz. gross at 812·167 gold and 154·249 silver.

Samples from 59 lots of nickel blanks (10,920,000 pieces) were assayed and found to satisfy specifications.

A number of medals and other articles were electro-plated for the Operative Department.

Two working trial plates, one each of gold and silver, were made and fixed against our standards.

Twenty-six ounces of fine gold was especially refined and assayed for the National Research Council.

Two and one-half ounces of Gold Proof and eight ounces of Silver Proof were sold.

A number of suspected counterfeit coins were examined and when necessary analyzed.

REFINERY DIVISION

Chief: C. J. MORRIS

Tellurium in Fine Silver:

In last year's annual report it was stated that an experimental furnace had been set up in the silver melting room and that a practicable method had been discovered of diminishing the tellurium and phosphorus content of our Fine Silver. This meant that the Refinery silver in future would be fit for coinage. Hitherto it had been too frangible for that purpose.

During the past nine months we have more than fulfilled our promise. Not only has all the incidental silver from Mint bullion been processed, but a total of 193,989·85 ounces of rejected fine silver has been rendered fit for coinage.

The average tellurium content has been reduced from 0.011 per cent to 0.003 per cent and nearly three quarters of a million ounces of useable fine silver has been delivered.

Gold and Silver Alloy Experiments:

At the request of the Medal Department, a number of divergent fourteen-carat gold alloys were made and tested with the object of selecting one for the International Congress Mathematical medal for the University of Toronto. The strong relief of this medal makes it a particularly difficult one to strike and the fourteen-carat is the trickiest of all gold alloys to prepare, but a satisfactory alloy bar was finally produced.

In conjunction with the Medal Department, experiments were made to determine the minimum hardness which could be obtained with 800 silver under normal working conditions. The investigation confirmed the importance of uniform annealing at the correct temperature. The informative X-ray spectra of Sir W. H. Bragg show the reason for this. Such an alloy as our 800 silver is made up of a close filled lattice-work of the cubic pattern with units of single atoms and electronic bonds. When the metal is given an external stress such as rolling, the whole crystalline system is compressed without the bonds being broken and the result is a hardening of the metal. If now the alloy is heated in an annealing furnace the crystals expand, the lattice-work reforms, and when a certain temperature is reached the crystallization settles down in a regular geometrical pattern.

If, however, the metal is removed from the furnace at too low a temperature, say below 600° C. (1112° Fahr.) the whole micro-structure is in a transition state and an irregular blistering is the result. In these days of the higher physics, the metallurgist must learn to think sub-microscopically.

Improvement and Development:

The fire-clay crucibles used by the Refinery for chlorination were formerly obtained from France, but the supply of these ceased when the Germans overran the country in 1940.

For nearly eight years, we were compelled to rely solely on one English firm for the supply of these pots for no Canadian Company was able to comply with the rigorous requirements of resistance to high pressure, high temperature, and the corrosive action of the flux. However, after many patient tests, a firm in Toronto has at last succeeded in manufacturing a crucible which satisfies all tests. Not only are they able to supply them at a lower cost, but we are also able to save on insurance, ocean freight, and railway transport.

The disposal of the recovery sweep has, since the War, presented rather a problem and the possibility of treating it ourselves has lately been considered. With this object in view, the help of the Mines Branch was solicited and their assistance, advice, and laboratory facilities have been much appreciated. The investigation is still proceeding.

A visit to the International Industrial Fair in Toronto resulted in plans being considered for the installation of a hydraulic tilter furnace to replace a manual tilter bought in 1916 and which is now not only out-of-date, but has pinions so worn that it is lop-sided and precision in pouring is no longer possible.

Experiments have lately been carried out on the purification of silver chloride. Dilute sulphuric acid and iron plates are first used for the reduction, resulting in silver 990 fine. The residual copper is then leached out with ferric chloride, producing silver with a fineness of 999.9.

The ferric chloride is economically prepared by passing chlorine through the ferrous solution obtained by the reduction of the silver chloride with iron.

Hydrogen Telluride:

The National Health Department during the year took atmospheric samples from different breathing points in the Refinery with the object of finding the content of tellurium, selenium, and arsenic. Hydrogen telluride was found in the air, and in certain parts of the Refinery such as the Cottrell precipitator, tellurium and arsenic were found in considerable proportions at the breathing level. However, no deleterious effect has been noted on the general health of the workers.

The following tables summarize the work done during the year:—

BULLION

Source	Number of Deposits	Fine Gold	Fine Silver
		Ounces	Ounces
Mines.....	4,193	3,295,654.559	485,912.43
Vancouver Assay Office.....	198	87,645.136	15,566.66
Miscellaneous.....	322	18,691.746	2,890.55

Refined and Delivered	Number	Gross Weight	Fine Weight	Average Assay
		Ounces	Ounces	
Fine Gold Bars.....	8,355	3,352,337.225	3,343,349.496	997.3
Granulated Gold.....		124,816.925	124,791.034	999.8
Fine Silver Bars.....	624	664,018.73	663,686.67	999.5
Granulated Silver.....		2,209.98	2,208.87	999.5

Received for Disposal	Sources	Gold Fine	Silver Fine	Platinum Fine
		Ounces	Ounces	Ounces
Granulated Gold.....	Mint Office	354.168		
Silver Medal Scrap.....	Mint Office		418.31	
Gold Medal Scrap.....	Mint Office	.272		
Silver Coin Scrap.....	Mint Office		479.49	
Jewellery Scrap.....	Various			.410

Special Processes	Number	Gross Weight	Silver Fine
		Ounces	Ounces
Re-melts.....	549	432,426.675	
Toughenings.....	13	6,359.725	
Sweeps.....	43	126,663.5 lbs. av.	
Chloride.....		71,370.0 lbs.	
Re-processed silver.....		186,308.47	186,215.36

ASSAY OFFICE, VANCOUVER, B.C.

Manager: F. R. MULFORD

The sum of \$3,077,555.15 was disbursed for gold bullion purchases and the following shows source, weights, etc., of the deposits:—

Source	Number of Deposits	Gross Weight	Fine Gold	Fine Silver
		Ounces	Ounces	Ounces
Yukon Territory.....	259	76,001.45	60,580.178	12,416.27
British Columbia.....	240	30,198.72	25,712.697	2,739.20
Alberta.....	5	106.74	78.122	7.04
Saskatchewan.....	2	4.63	3.514	.31
North West Territory.....	6	323.99	263.988	32.87
Jewellery and Dental Scrap...	109	3,588.27	1,628.885	529.38
	621	110,223.80	88,267.384	15,725.07

COMPARATIVE STATEMENTS

(1) TOTALS FOR EACH YEAR UNDER ABOVE HEADINGS, 1940 TO 1948, INCLUSIVE:—

1940.....	2,224	219,976.14	175,301.091	31,822.17
1941.....	1,978	202,766.19	163,014.058	28,462.72
1942.....	1,460	183,738.18	147,517.917	26,422.54
1943.....	722	80,552.50	63,312.314	11,630.24
1944.....	577	48,983.87	37,679.028	7,649.55
1945.....	499	61,113.31	48,131.200	8,923.70
1946.....	603	85,071.57	67,325.255	12,923.84
1947.....	578	76,041.64	59,739.223	11,595.18
1948.....	621	110,223.80	88,267.384	15,725.07

(2) TOTALS FOR EACH YEAR, 1940 TO 1948, INCLUSIVE, DISBURSED FOR GOLD BULLION PURCHASES:—

1940.....	\$6,685,353.07
1941.....	6,216,906.58
1942.....	5,628,080.26
1943.....	2,414,688.10
1944.....	1,436,665.86
1945.....	1,835,799.67
1946.....	2,406,170.90
1947.....	2,081,867.67
1948.....	3,077,555.15

The increase in the amount of gold received over previous year was due to greater production in both Yukon Territory and British Columbia. A further increase can be expected from B.C. sources during 1949, as a number of producers from U.S.A. have established or propose to establish operations on comparatively large scale in this province.

While the quantity of gold received during the year was not sufficient to keep the staff too busy, the erratic delivery of deposits caused situations to arise from time to time where extra effort was required by one or more individuals of the various departments in order that the work might be got out with promptitude and accuracy. I am glad to be able to report that such extra assistance was always rendered voluntarily when necessary.

Inter-departmental co-operation was also excellent.

GENERAL

The annual stocktaking and inspection of the store of bullion and coin, as required by the Act establishing the Royal Canadian Mint, was conducted by officers of the Auditor General's Department in March.

The Assay Commissioners, Dr. J. Katzman of the Division of Physics, National Research Council, Mr. C. H. Bayley of the Division of Chemistry, National Research Council, and Mr. J. A. Fournier, Chief Chemist of the Metallic Minerals Division, Department of Mines and Resources, appointed under the provisions of the Currency Act for the purpose of ascertaining that coins of the Currency of Canada struck at the Royal Canadian Mint during 1947 had been minted in accordance with the provisions of the said Act, were sworn in by His Honour, Judge A. G. McDougall, in the presence of Mr. G. E. Lowe as representative of the Department of Finance, on the fourth day of May, 1948.

The findings of the Assay Commissioners indicated that the coins, both as to weight and fineness, conformed with the standards established by the Currency Act.

Nine thousand, two hundred and twenty visitors were admitted to view the coining operations of the Mint during the year.

Through the courtesy of the National Film Board a number of films were shown for the entertainment of the staff during the Christmas season.

The number on the staff on December 31, 1948, was 344, the largest in the history of the Mint. Of the above number 21 were employed in the Administrative and Mint Office, 266 in the Coining and Medal Division, 14 in the Assay Division, 34 in the Refinery, and 9 in the Assay Office at Vancouver.

Appendix "A" shows the transactions in gold bullion since the opening of the Mint in January, 1908, and in Appendix "B" are given the details of the coin issues in Canada since 1858.

I am, Sir,

Your obedient Servant,

W. C. RONSON,
Master, Royal Canadian Mint.

APPENDIX A

Summary of Transactions in GOLD BULLION of the Ottawa Branch of the Royal Mint from its opening on January 2, 1908, to its disestablishment on November 30, 1931, and of the Royal Canadian Mint from December 1, 1931, to December 31, 1948.

Year	GOLD RECEIVED		GOLD ISSUED		Statutory Value Coin and Bullion
	Gross Weight	Statutory Value Gold only	Coin	Bullion	
1908 to 1938.....	Ounces	\$	\$	Ounces Fine	\$
1939.....	64,471,725.556	1,083,048,898.91	7,923,878.73	51,880,502.929	1,080,389,048.99
1940.....	6,181,336.290	100,656,105.55	.....	4,834,214.285	99,932,075.82
1941.....	6,295,218.554	103,169,970.38	30.00	5,026,792.728	103,913,055.43
1942.....	6,444,056.215	105,273,560.67	.....	5,134,347.805	106,136,385.78
1943.....	5,761,045.973	95,338,135.90	.....	4,611,892.227	95,336,270.79
1944.....	4,456,437.559	74,769,168.35	.....	3,645,739.964	75,364,131.92
1945.....	3,537,734.636	59,163,794.79	.....	2,829,755.000	58,496,226.17
1946.....	3,102,991.020	51,750,218.87	.....	2,499,163.674	51,662,297.22
1947.....	3,271,246.445	54,826,765.59	.....	2,665,964.763	55,110,381.61
1948.....	3,559,496.703	59,296,515.31	.....	2,859,084.218	59,102,514.80
1948.....	4,252,389.454	70,325,402.34	.....	3,405,073.335	70,389,111.41
	111,333,678.405	1,857,618,536.66	7,923,908.73	89,392,530.928	1,855,831,499.94

APPENDIX B
COIN ISSUED IN CANADA

	SILVER										NICKEL	TOMBAC	STEEL	BRONZE				
	Dollar \$	50c \$	25c \$	20c \$	10c \$	5c \$	Total Silver \$	5c \$	5c \$	5c \$				1c \$	½c \$			
1858 to 1907		New Brunswick, 1861, 2 and 4 Nova Scotia, 1861, 2 and 4, Prince Edward Island, 1871. Rest of Canada, 1858 - 1907	Struck in England															
Totals.....				1,249,018	5,094,978	150,000	3,040,000	2,926,000	12,459,996	803,315	859,315	5,114						
				1,249,018	5,094,978	210,000	3,065,000	2,936,000	12,554,996									
GOLD																		
1908 to 1937																		
1938																		
1939																		
1940																		
1941																		
1942																		
1943																		
1944																		
1945																		
1946																		
1947																		
1948 (dated 1947)																		
1948 (dated 1948)																		
Totals.....				627,834,348.360	1,388,060	20	10	20	10	20	10	20	10	20	10	20	10	20
				627,834,348.380	1,388,070	20	10	20	10	20	10	20	10	20	10	20	10	20

* Of this amount \$15,000 returned in 1940.

† This coin struck in 1943.