## ROYAL CANADIAN MINT

OTTAWA, 3lst March, 1936.

Sir,
I have the honour to submit the following report on the operations of the Royal Canadian Mint during the calendar year 1935.

OPERATIVE DEPARTAENT
(H. E. Ewart, M.E.I.C., Superintendent)

Coining
12,810,222 pieces were struck, the details, with those of the previous year of the pieces delivored to the Mint Office, being as follows:

| Denomination | 1934 | 1935 |
| :---: | :---: | :---: |
| SILVER - One Dollar | - | 428,707 |
| 50-cents | 39,539 | - |
| 25-cents | 384,350 | 537,772 |
| lo-cents | 409,067 | 384,056 |
| NICKEL - 5-cents | $3,827,304$ | $3,960,000$ |
| BRONZE - One cent | $7,042,358$ | $7,526,400$ |

The most interesting event of the year was the issue of the silver dollar commemorative of the twenty-fifth anniversary

The Honourable,
The Minister of Finance,
of the Accession of His late Majesty, King George $V$, the first time in Canadian history a coin of this denomination was issued, and also the first issue in Canada of a coin to mark a particular event. The design adofted for the obverse was His late Majesty's effigy, crowned, and wearing the Robe of state with the Collar of the Garter, with the inscription "GEORGIUS $V$ REX ET IMPERATOR ANNO REGNI XXV', and for the reverse a canoe manned by an Indian and a Voyageur, an islet in the background, with the word "CANADA" above among the Northern Lights and the word "DOLLAR" below. The reverse design mas modelled by Rir. Emanuel Hahn, R.C.A., and the master dies were prepared in the Royal Mint, London. There was a steady demand for these coins from the first issue in May until the end of the year, when their coinage was discontinued, and it is considered that a large number of them have been placed in collections or have been retained as souvenirs, and are not likely, for some years at least, to form part of the general circulation.

For the year's coinage $1,076,361$ ounces silver, 800 fine, and 83,618 pounds bronze were cast into bars, a total of $783 / 4$ tons (short). The 5-cent pieces were, as usual, struck from blanks, ready for the press, purchased from a contractor. The average number of pieces struck per pair of dies was 69,244 , ranging from 295,153 pieces struck from each pair of one-cent dies to 7,500 from each pair of dollar dies, the unusually high consumption of dollar dies being due to the difficulties experienced in the preliminary work on this large coin. In all, 458 coinage matrices, punches and dies were made during the year.

## Medals, Seals \& Signature Dies

392 Royal Canadian Mounted Police Long Service Medals were struck, the obverse master die for which was supplied by the Royal Mint, and the reverse die engraved by $k$. H. S. Low, the Mint Engraver. 309 of these medals, mounted with clasps, and

With the names of the recipients on the odge, were delivered to the Commissioner, the balance being held in store. The obverse of the medal bears the effigy of His late Majesty, as used on certain British Police medals, and on the reverse are the badge and motto of the Royal Canadian Mounted Police and the legend "FOR LONG SERVICE AND GOOD CONDUCT". The medal is suspended by a ribbon, blue with two yellow stripes. Three gold medals were struck for the Royal Society of Canada. A Privy Seal was engraved for His Excellency Lord Tweedsmuir on his assumption of office as GovernormGeneral, and a smaller seal bearing His Excellency's Arms was also supplied. For the Bank of Canada there were supplied One embossing seal and counterseal fitted in a press, and 176 signature dies, 136 seal dies and 49 other items, in solid steel for use in connection with the Bank's notes. Three signature dies were made for the Comptroller of the Treasury's office. The work of engraving the three seals was ably executed by Nr。 Low。

## Machine Shop \& General

Machinery and plant, and the heating and electrical equipment, were maintained in a state of the highest efficiency, and, in addition, much extra work was called for in connection with the striking for the first time of a coin of silver dollar size, and with the equipment of the new Refinery under construction. To heat and to provide steam for the latter building, a third boiler was installed, and the two boilers already in use were inspected by an officer of the Public Works Department and reported in good condition. The repair and renewal work throughout the year was of an exceedingly varied character.

## MINT OFFICE

(G.V.T. Howard, Secretary.)

Silver, nickel and bronze coin as received from the operative Department was weighed, counted, and packed for delivery,
the dollars being counted by hand and packed in cartons of twenty pieces each in order to reduce wear by friction during transit．The issues were as shown in the following table which includes for purposes of comparison the figures for the previous year．

| Denomination | Nominal Value |  |
| :---: | :---: | :---: |
|  | 1934 | 1935 |
| 50－cents | $\$ 10$ | 428,120 |
| 25－cents | 19,200 | - |
| 10－cents | 105,100 | 134,400 |
| NICKEL－5－cents | 48,000 | 38,500 |
| BRONZE－l－cent | 193,000 | 194,000 |

There were withdrawn from circulation worn and mutilated silver coin，chiefly of the old（925）standard to the nominal value of $\$ 1,593,860$ ，the year＇s operations thus showing a known net decrease of nearly $⿰ ⿰ 三 丨 ⿰ 丨 三 八 993,000$ in the silver coin circulating in the Dominion．$\# 1,695$ in nickel coin，all mutilated，and $\$ 4,636$ in bronze coin，chiefly the large cents coined before 1920，were also withdrawn．

6，356 deposits of gold bullion（including 222 Assay office bars from Vancouver）weighing $3,996,132$ ounces gross and contain－ ing by assay $3,158,780$ ounces fine gold and 414,405 ounces fine silver，were received and passed to the Refinery．The total re－ ceipts at the Mint and the Dominion of Canada Assay Office，dis－ tributed as to origin，were as follows：

|  | Gross Weight | Fine Gold | Fine Silver |
| :---: | :---: | :---: | :---: |
|  | Ozs. | Ozs. | Ozs. |
| From Canadian Mines | 3,878,249 | 3,109,697 | 400,450 |
| Old jewellery, scrap, etc. | 127,719 | 55,023 | 15,196 |
| Gold Coin | 15 | 13 | -- |
| Totals | 4,005,983 | 3,164, 733 | 415,646 |

Throughout the year the rate paid for gold was fixed weekly by the Department of Finance, and was based on the price obtained by the Government for gold sold outside Canada converted into Canadian funds at the average of the daily rates of exchange. Silver prices were based on the equivalent in Canadian funds of the average London quotation for the first five days of each week. After deducting mint and handing charges, gold tax, and postage collected on account of the Postmaster General, the net amount paid to depositors by cheque was $\$ 104,314,382$, including $\$ 45,580,689$ "premium" on gold, in addition to 9,727 ounces fine gold issued in payment for deposits.

7,816 400-ounce ingots (trade bars) containing 3,159,011 ounces fine gold were weighed, marked and numbered, and dolivered to the Finance Department or its agent the Bank of Canada. Granulated fine gold, including payments of deposits, proof plate, medals and gold in sweep sold brought the total issues up to $3,177,497$ ounces fine. The issues of silver bullion, including 369,653 ounces fine purchased by the Bank of Canada under the London Agreement, and 189,777 ounces fine in sweep sold, amounted to 559,858 ounces fine.

Acting as agent for the Royal wint for the distribution through wholesale trading companies of the King's Silver Jubilee Medals, 189 large and 3,380 small medals were issued.

REFINERY<br>(P.W. Bond, Superintendent)

The receipts from, and deliveries to, the Mint office are tabulated below:

| Description | Number | Gross <br> Wei.ght | $\begin{aligned} & \text { Fine } \\ & \text { Gold } \end{aligned}$ | Fine Silver |
| :---: | :---: | :---: | :---: | :---: |
|  |  | OzS。 | OzS。 | OzS. |
| RECEIPTS |  |  |  |  |
| Deposits | 6,134 | 3,907,574 | 3,093,259 | 400,219 |
| Assay Office Bars | 222 | 88,543 | 65,509 | 14,186 |
| Total Receipts |  | 3,996,117 | 3,158,768 | 414,405 |
| DELIVERIES |  |  |  |  |
| 400-oz. ingots | 7,778 | 3,157,273 | 3,148,565 |  |
| Granulated gold |  | 18,255 | 18,253 |  |
| Silver ingots |  | 249,033 |  | 248,610 |
| Granulated silver |  | 1,273 |  | 1,271 |
| Other items |  | 17 | 3 | 14 |
| Total Deliveries |  | 3,425,851 | 3,166,821 | 249,895 |

In order to obtain concordant assays, 105,348 ounces rough gold were toughened and 106,731 ounces remelted.

3,316,556 ounces rough gold, containing by assay $2,394,627$ ounces fine gold and 524,931 ounces fine silver, were refined by chlorine, 397,000 ounces base metal being removed in the process. It was not found practicable with the equipment available to reduce all the silver chloride produced, but it is hoped with the facilities of the new Refinery now in course of construction to have the accumulation of this material brought to final account.

Sweep weighing nearly 66 tons and containing by assay 2,008 ounces fine gold and 189,777 ounces fine silver was prepared for sale and packed and shipped to the Smelters submitting the highest bids for the several lots.

## ASSAY OFFICE

(A.I. Entwistle, F.I.C., Chief Chemist \& Assayer)

The number of assays made during the year was as follows:

GOLD

> Refinages
> Rough Gold Proofs Parting Buttons Parting Proofs Miscellaneous

$$
4,887
$$

29,777
2,920
12,435
897
1,675 52,591

SILVER

Standard Bars Proofs Pyx Fine Silver Miscellaneous
1.453

516
325
860
252 3,406

MISCELTLANEOUS

| Mint Sweeps | 192 |  |
| :---: | :---: | :---: |
| Marking Act | 40 |  |
| Suspected Cou Coins | it 16 |  |
| Conmercial | 60 | 308 |
|  | Total | 56,305 |

Two fine gold proof plates and one fine silver proof plate were made and fixed, and 23.17 ounces proof gold and l4 $\frac{1}{2}$ ounces proof silver were sold.

The mean millesimal fineness of the dollars was 799.3, of the 25 -cent pieces 799.81, of the 10 -cent pieces 799.65. Samples taken from 50,200 pounds nickel blanks supplied by contractors were examined for composition and hardness, and
the blanks were found to comply in all respects with the specification.

Before proceeding with the coinage of the silver dollar, an investigation was made to determine the relative distribution of copper and silver throughout the width of the rolled fillet from which the blanks were cut in a single row, and from the valuable information so obtained a formula was calculated to govern the composition of ingot and scissel pots in order to obtain coins well within the prescribed remedy of fineness. It is noted that 14 assays of samples taken right across a fillet 1 13/16 inch wide varied from 801.2 in the centre to 796.7 and 796.6 at the margins, the mean of the fillet being 798.07, and of the blank 798.76, the processes of annealing and blanching bringing the finished coin up to the standard fineness.

A process developed in 1933 in the Assay office for the generation of nascent chlorine from bleaching powder, to bring the insoluble compounds (tellurium, etc., ) in the chlorides produced in the gold refining process into a soluble state, was in continuous successful operation in the Refinery, and has replaced the older method of generating nascent chlorine from sodium hypochlorite made from caustic soda and chlorine.

DOMINION OF CANADA ASSAY OFFICE VANCOUVER B. C. (G. N. Ford, Manager)

The deposits at this office, 2,330 in number, weighed 98,394 ounces gross and contained 71,462 ounces fine gold and 15,428 ounces fine silver; they included 34,073 ounces gross from British Columbia, 43,650 ounces gross from Yukon Territory, and 540 deposits of scrap gold containing 10,091 ounces fine gold and 2,964 ounces fine silver. Total net payments to depositors amounted to $\mathbf{\$ 2 , 4 8 2 , 8 1 6 .}$

After melting, assay and valuation, all deposits received at Vancouver are melted into bars of a suitable size and forwarded to ottawa where they are checked as to weight and assay, and passed to work in the Refinery in ordinary course. The constant close agreement between the fine gold content of the Assay Office bars, determined at the Mint, and of the original deposits, is a tribute to the accuracy of the work of the Vancouver office.

## GENERAL

Officers of the Auditor General's Department conducted, in March, the stock-taking required by the act establishing the Royal Canadian Mint.

The Assay Commissioners, appointed under The Currency Act for the purpose of ascertaining that the coins struck during the year 1934 were coined in accordence with the provisions of the act, met at the Mint in the first week of May, and found by their verdict that all the silver coins, there being no gold coins, in the Pyx were within the prescribed remedies of weight and fineness.

2,185 visitors, including parties of students, were shomn over the works.

Appendix A shows the transactions in gold bullion since the opening on the 2nd January, 1908, of the Mint in ottawa, and in Appendix $B$ details are given of the issues of coin in Canada.

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I am,Sir,
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