

No. 2.

January, 1911

Vol. IV.

Bulletin

OF THE

Ontario Hospitals for the Insane

*A Journal Devoted
to the interests of
Psychiatry in Ontario*

Printed by Order of the Legislative Assembly.



FOR THE DEPARTMENT OF THE PROVINCIAL SECRETARY.

Printed by L. K. CAMERON, Printer to the King's Most Excellent Majesty.

N.B.—The accompanying is a Comparative Statement of the cost of maintenance per patient per day for the twelve months ending 31st October, 1910, in the ten Hospitals for the Insane, as compared with the ten months ending 31st October, 1909, based on actual consumption and calculated to two places of decimals of a cent. The figures in black-faced type represent totals. Under the headings "Provisions and Clothing" is shown the actual consumption by patients—the value of such supplies to officers, attendants, nurses and employees being included in the account "Employees' Meals and Uniforms." The produce of the Farm and Garden consumed is included in the gross per capita cost, and being deducted as shown, gives the net per capita cost per day. The decrease in the earnings of the farm this year as compared with last is owing to the fact that the produce has been charged for this year at a greatly reduced price.

	BROCKVILLE		COBourg		HAMILTON		KINGSTON		LONDON		MIMICO		ORILLIA		PENNINGTON		TORONTO		WOODSTOCK	
	This Year	Last Year	This Year	Last Year	This Year	Last Year	This Year	Last Year	This Year	Last Year	This Year	Last Year	This Year	Last Year	This Year	Last Year	This Year	Last Year	This Year	Last Year
Average number of patients.....	672.42	676.81	145.64	145.26	1165.39	1135.8	681.16	693.65	1079.09	1075.	692.29	693.05	552.25	570.77	367.13	351.62	663.63	657.7	153.62	110.33
MEDICINES.....	44	44	24	32	22	29	56	58	26	26	42	50	15	16	30	26	34	40	80	77
Medicines and Medical Comforts.....	44	44	24	32	22	29	56	58	26	26	42	50	15	16	30	26	34	40	80	77
PROVISIONS.....	12 72	12 86	9 49	10 04	12 91	12 04	12 24	12 27	11 89	12 06	12 08	11 56	9 66	9 41	11 29	11 45	16 82	16 64	14 61	14 18
Breakfast Foods and Cereals.....	37	44	34	35	30	32	35	38	38	38	38	43	16	16	25	31	45	41	51	45
Butter.....	1 79	1 78	1 16	1 12	2 00	1 85	1 84	1 79	1 99	1 81	2 78	2 61	2 35	2 29	1 85	1 80	2 65	2 41	3 47	3 27
Coffee.....	06	06	05	06	13	12	04	08	13	16	03	03	08	08	21	33	04	03	14	16
Eggs.....	36	48	03	03	21	20	66	64	22	20	46	32	04	06	04	06	50	58	19	16
Flour, Bread, Etc.....	1 64	1 77	1 46	1 60	1 65	1 61	1 65	1 62	1 80	1 63	1 62	1 84	2 03	1 91	1 87	1 88	1 59	1 67	1 60	1 67
Fruit and Vegetables—Fresh.....	52	58	43	38	66	75	61	44	59	86	71	64	31	36	33	38	46	51	87	1 14
" " Canned and Dried	37	42	32	42	38	36	36	21	24	25	22	24	13	14	32	35	67	58	78	73
Milk.....	1 28	1 29	1 39	1 52	1 27	1 27	1 20	1 25	1 33	1 14	98	1 00	98	1 00	1 23	88	1 59	1 59	2 83	2 55
Potatoes.....	57	1 02	35	42	45	58	37	76	60	61	43	32	41	33	27	37	56	70	62	61
Salt, Etc.....	05	05	01	03	06	06	06	05	06	07	08	07	04	04	03	05	08	08	04	04
Sugar and Syrup.....	89	76	41	68	76	71	64	68	82	86	72	72	47	41	45	63	87	87	1 02	95
Tea.....	33	35	33	34	25	22	30	28	32	34	30	34	19	16	26	29	41	43	22	31
Unenumerated Groceries.....	61	42	48	46	64	38	58	1 19	56	98	65	80	18	27	33	56	71	93	74	27
Butchers' Meat.....	3 51	3 15	2 68	2 53	3 45	3 05	3 01	2 54	2 60	2 56	2 15	1 78	2 25	2 19	3 33	3 10	5 26	5 06	86	1 09
Fish and Fowl.....	37	29	05	10	67	56	57	36	25	21	57	42	04	01	52	46	98	79	72	78
HEATING AND LIGHTING.....	5 89	5 86	5 47	4 81	5 47	5 07	4 58	4 35	5 01	5 19	5 02	4 93	2 91	2 87	4 22	4 53	5 64	5 21	7 37	9 70
Coal and Wood.....	4 74	4 75	4 52	3 86	4 39	4 06	3 59	4 29	3 78	4 06	4 87	4 78	2 65	2 61	3 74	3 56	4 32	4 13	6 05	8 16
Electricity.....	01	..	94	95	75	78	94	..	..	..	..	..	25	25	43	93	53	44	1 28	1 52
Gas.....	1 11	1 08	..	..	31	22	..	..	1 18	1 07	..	..	..	..	..	..	76	60	..	..
Oil Etc.....	03	03	01	..	02	01	05	06	05	06	15	15	01	01	05	04	03	04	04	02
CLOTHING.....	1 86	1 66	1 22	1 45	1 19	1 21	2 36	2 02	1 92	1 90	1 62	1 42	2 11	1 94	1 62	2 66	37	1 04	54	40
Clothing—Dry Goods.....	1 42	1 27	1 04	1 37	90	93	1 97	1 61	1 54	1 56	1 28	1 13	1 58	1 52	1 27	2 28	22	80	30	25
Boots and Shoes.....	44	39	18	08	29	28	39	41	38	34	34	29	53	42	35	33	15	24	24	15
LAUNDRY AND CLEANING.....	73	59	81	54	61	75	1 00	92	81	86	75	76	77	70	41	61	1 05	86	1 22	1 10
Brushes, Brooms and Mops.....	16	14	05	06	11	14	25	16	17	16	15	15	19	12	12	14	16	14	15	15
Miscellaneous Expenses.....	20	12	17	05	17	09	28	31	22	20	18	17	08	12	13	13	21	17	23	30
Soap.....	37	33	59	43	33	52	47	45	42	50	42	44	50	46	16	34	68	55	79	65
REPAIRS AND REPLACEMENTS.....	1 74	1 68	96	1 06	1 82	1 41	2 73	2 58	2 24	2 26	1 67	2 02	1 27	1 25	1 68	1 94	1 93	1 89	1 19	1 61
Furn. and Furn.....	1 50	1 45	60	70	1 42	1 01	2 03	1 95	1 75	1 69	1 23	1 48	87	74	80	1 27	1 53	1 54	72	95
Miscellaneous Items.....	..	02	01	03	..	01	01	02	03	03	02	02	01	02	04	06	04	01	01	02
Plant.....	24	21	35	33	40	39	69	61	46	54	42	52	39	49	84	61	36	34	46	64
OFFICE EXPENSES.....	44	36	45	45	30	28	71	53	36	34	44	39	18	15	34	28	42	32	63	69
Miscellaneous Office Expenses.....	26	21	21	17	20	19	49	31	22	21	26	20	11	08	18	12	25	22	43	42
Postage.....	10	08	06	09	05	04	13	13	06	06	07	08	04	04	05	06	07	05	10	13
Telephoning and Tel.....	08	07	18	19	05	05	09	09	08	07	11	11	03	03	11	10	10	05	10	14
SALARIES.....	17 00	16 44	24 55	23 58	16 40	15 58	23 35	22 22	18 16	18 12	23 36	21 72	11 79	11 88	21 47	21 48	19 53	18 31	29 17	40 71
Supt. and Physicians.....	2 03	1 89	4 74	4 19	1 72	1 65	2 94	2 67	1 68	1 63	2 73	2 51	1 32	1 34	2 81	2 86	2 02	1 97	4 37	6 95
Bursar and Assistants.....	1 37	1 36	2 86	2 75	1 06	1 04	1 47	1 53	1 11	1 09	1 27	1 27	99	1 01	1 71	1 75	1 62	1 29	3 10	4 31
Matron and Assistants.....	1 98	1 96	5 04	4 87	1 89	1 90	2 53	2 63	2 04	1 99	2 33	2 09	1 86	1 89	2 67	2 57	2 60	2 57	3 41	4 99
Engineer and Assistants.....	1 10	1 07	3 00	2 94	96	91	1 30	1 26	1 12	1 13	1 95	1 89	75	85	1 72	1 48	99	75	1 60	2 22
Artisans, not Domestic.....	68	72	34	57	54	55	1 21	1 21	75	78	48	49	51	51	1 28	1 40	96	93	1 07	1 49
Farm and Garden.....	86	88	1 13	75	99	94	88	1 07	1 13	1 07	1 17	1 45	62	63	1 82	2 01	67	62	3 54	4 76
Teachers.....	..	..	..	..	..	..	..	..	..	..	..	..	40	41	..	..	..	..	..	..
Attendants.....	3 00	2 86	..	..	3 32	3 17	5 46	5 25	3 78	3 70	5 03	4 58	2 02	1 97	3 06	3 11	4 09	4 09	4 13	5 47
Nurses.....	2 36	2 32	3 94	4 06	1 94	1 84	3 00	2 65	2 46	2 49	2 45	2 25	96	1 04	2 02	2 00	2 79	2 82	2 93	3 11
Employees' Meals and Uniforms.....	3 54	3 23	3 18	3 29	3 95	3 49	4 35	3 82	3 96	4 20	5 63	4 93	2 23	2 12	4 01	3 97	3 61	3 25	5 00	7 29
Employees' Other Allowances.....	08	15	32	16	03	09	21	13	13	04	32	26	13	11	37	33	18	02	02	12
FARM AND GARDEN.....	2 91	2 27	22	22	2 39	2 69	3 43	2 99	2 54	2 26	2 27	3 88	1 15	93	3 66	2 70	1 91	2 12	4 75	6 99
Feed and Fodder.....	2 32	1 66	..	..	1 33	2 23	2 62	2 10	1 98	1 56	1 26	2 54	81	67	2 78	2 11	1 57	1 83	3 01	5 11
Miscellaneous Farm Expenses.....	52	55	13	14	39	26	64	58	39	48	71	1 04	32	24	63	39	30	25	1 29	1 06
Seeds, Etc.....	07	06	09	08	17	20	17	31	17	22	30	30	02	02	25	20	04	04	45	82
MISCELLANEOUS.....	1 43	1 45	2 07	1 86	1 50	1 75	1 55	69	44	43	55	57	49	53	1 67	1 29	1 07	1 21	3 50	4 20
Amusements, Religion, Education.....	15	11	04	..	06	07	23	22	13	14	07	19	09	07	02	02	16	19	05	32
Elopers, Cost of Recovery.....	02	02	..	..	02	..	02	06	03	03	..	..	..	..	01	01	01	02	04	01
Freight, Duties, Etc.....	05	05	16	08	03	06	09	15	05	05	08	10	06	06	26	16	03	02	06	08
Ice.....	11	18	20	24	28	38	02	..	01	..	14	17	03	03	..	..	22	15	01	..
Incidental Expenses.....	21	19	40	28	23	20	26	17	20	18	19	10	05	09	23	16	11	13	15	03
Officers' Travelling Expenses.....	07	09	03	05																

HOSPITALS FOR THE INSANE

PROVINCIAL SECRETARY'S DEPARTMENT, ONTARIO

Comparisons, Appropriations, Expenditures, Consumptions, Population, Revenue for the 12 months ending Oct. 31, 1910

	BROCKVILLE	COBOURG	HAMILTON	KINGSTON	LONDON	MIMICO	ORILLA	PENETANG	TORONTO	WOODSTOCK
Days' residence of Patients	245 436	53 160	425 369	212 127	393 868	216 187	285 987	131 557	315 246	56 147
Average number of Patients	672 42	145 64	1 165 39	581 16	1 079 09	592 29	786 26	1360 43	366 68	153 82
MEDICINES										
Appropriation	1 080	200	1 200	1 200	1 200	1 000	500	750	1 200	600
Expenditure	1 075 23	124 43	948 46	1 197 35	1 014 98	895 64	435 53	395 78	1 044 82	444 30
Consumption	1 089 96	124 43	958 24	1 197 35	1 014 98	902 15	437 28	395 78	1 081 05	450 70
PROVISIONS										
Appropriation	37 000	7 800	57 600	36 000	51 600	33 000	30 500	18 000	56 400	8 500
Expenditure	33 957 07	6 550 92	56 155 96	28 560 02	48 532 82	32 280 06	30 055 83	17 466 48	56 375 64	8 345 98
Consumption	31 211 42	5 043 37	54 903 89	25 954 64	46 846 06	26 104 07	27 736 59	14 852 62	53 033 69	8 201 35
HEAT AND LIGHT										
Appropriation	16 500	3 800	25 000	13 500	23 000	11 000	10 000	8 300	18 300	4 300
Expenditure	16 322 01	2 497 50	24 894 45	13 327 48	19 143 24	10 919 14	9 755 34	7 329 62	17 422 5	3 671 11
Consumption	14 449 90	2 906 42	23 269 05	9 723 77	19 738 00	10 860 51	8 343 89	5 545 48	17 771 55	4 136 69
CLOTHING, ETC.										
Appropriation	5 700	700	8 500	5 800	9 800	5 400	6 300	4 800	4 800	900
Expenditure	5 501 70	675 24	7 518 38	5 686 44	9 483 37	5 249 26	6 729 71	3 360 58	4 766 95	652 77
Consumption	4 576 82	647 88	5 060 13	5 021 21	7 565 47	3 507 78	6 046 65	2 123 94	1 168 52	306 00
LAUNDRY, ETC.										
Appropriation	1 800	400	2 650	2 160	3 600	1 800	2 500	1 200	3 000	900
Expenditure	1 608 30	382 99	2 139 83	2 124 56	3 274 30	1 571 77	2 425 45	721 81	2 993 72	753 25
Consumption	1 798 05	480 74	2 596 29	2 110 78	3 174 83	1 628 87	2 196 67	544 06	3 294 48	683 13
REPAIRS, ETC.										
Appropriation	5 000	600	7 500	7 000	9 800	800	4 000	4 000	7 000	750
Expenditure	4 994 11	466 01	7 499 18	6 280 11	9 544 29	4 023 39	3 985 98	2 689 46	5 908 72	703 35
Consumption	4 268 19	508 38	7 720 15	5 800 55	8 820 54	3 610 58	3 642 34	2 205 20	6 021 91	668 07
OFFICE										
Appropriation	1 000	250	1 400	1 500	1 500	1 000	600	600	1 400	450
Expenditure	999 51	231 75	1 270 81	1 472 09	1 435 63	955 64	494 53	428 63	1 399 03	352 48
Consumption	1 075 47	248 35	1 289 71	1 498 34	1 419 23	956 14	507 08	448 05	1 320 10	354 33
SALARIES										
Appropriation	35 526	13 000	53 277 20	43 533	57 200	39 250	28 767	24 115	50 147	17 936
Expenditure	32 859 79	11 192 35	52 830 65	39 844 43	55 429 38	37 625 79	27 045 27	22 479 31	49 523 29	13 558 90
Consumption	41 729 64	13 049 00	69 768 06	49 520 24	71 515 42	50 498 50	33 843 04	28 249 50	61 566 15	16 378 17
FARM, ETC.										
Appropriation	5 500	300	7 000	6 500	4 800	4 000	3 600	4 500	7 200	1 500
Expenditure	5 471 30	117 91	6 969 29	5 817 67	4 762 98	2 349 37	3 136 64	3 932 46	6 782 05	1 236 34
Consumption	7 133 30	117 91	10 164 28	7 272 60	10 030 75	4 904 34	3 322 69	4 819 76	6 025 95	2 665 71
MISC. EXPENSE										
Appropriation	4 000	1 100	7 000	2 000	1 500	1 300	1 200	2 500	6 500	3 500
Expenditure	3 591 28	1 099 58	6 385 09	1 319 69	1 499 76	1 298 36	1 011 45	2 197 07	3 387 01	1 818 78
Consumption	3 512 83	1 102 04	6 400 16	3 294 96	1 727 96	1 206 29	1 406 08	2 203 17	3 373 99	1 964 61
TOTAL MTCE.										
Appropriation	113 106	28 150	171 127 20	119 193	164 000	102 550	88 467	68 765	155 947	39 336
Expenditure	106 380 30	23 338 68	166 612 10	105 629 84	154 125 75	97 163 42	85 075 73	61 001 20	149 603 80	31 537 26
Consumption	110 845 58	24 179 12	182 124 96	111 394 44	171 853 24	104 179 23	87 482 31	61 387 56	154 717 39	35 808 79
CAPITAL ACCTS.										
Appropriation	16 000	3 300	28 800	23 000	41 570	19 600	14 000	14 900	9 000	6 500
Expenditure	15 404 54	2 562 98	16 777 29	21 403 81	10 389 58	18 718 89	5 368 08	9 511 85	7 667 03	4 470 49
Consumption										
GRAND TOTAL										
Appropriation	129 106	31 450	199 927 20	142 193	205 570	122 150	102 467	83 665	164 947	45 836
Expenditure	121 784 84	25 901 66	183 389 39	127 033 65	164 515 33	115 887 31	90 443 81	70 513 05	157 270 83	36 007 75
Consumption										
REVENUE COLLECTIONS										
From Paying Patients this year to date	12 119 99	591 60	35 966 91	14 527 21	36 002 09	17 247 27	9 903 17	2 506 61	49 952 86	12 259 14
" " " last " "	11 834 48	648 33	32 987 81	12 856 21	30 073 02	15 347	8 806 22	1 646 01	43 707 57	9 690 78
From Farm and Misc. this " "	1 262 43	116 60	543 18	1 411 23	537 87	1 391 55	1 460 15	1 240 75	1 111 76	1 505 95
" " " last " "	1 451 71	889 08	521 63	1 339 58	641 06	865 77	763 57	935 91	792 72	746 04
Total Revenue this year to date	13 382 42	708 20	36 510 09	15 938 44	36 539 96	18 638 82	11 363 32	3 747 36	51 064 62	13 765 09
" " last " "	13 286 19	1 537 41	33 509 44	14 195 79	30 714 08	16 212 77	9 569 79	2 531 92	44 498 29	10 456 82
Grand Total this " "	from the above Institutions					\$201 658 32				
" " last " "	" " " "					176 542 50				
Total Revenue per capita per day this year to date.	Cents 5 45	1 33	8 58	7 51	9 28	8 62	3 95	2 85	16 20	24 51
Total Revenue per capita per day last year to date.	Cents 5 36	2 90	8 08	6 64	7 82	7 59	3 37	2 00	14 23	26 32

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The Bulletin
OF THE
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*A Journal Devoted to the Interests of
Psychiatry in Ontario.*

HOSPITAL ACCOUNTING.

BY HON. W. J. HANNA.

Provincial Secretary.

Upwards of four years ago we set about installing an Accounting System, including a Quarterly Statement that would keep the Department in close touch with its revenues and expenditures, and would also show the comparative cost of maintenance in each institution. The result was a complete reorganization of the Accounting System, and the regular issue of a quarterly Spread-sheet, a copy of which for the final quarter of 1910, ending on the 31st of October last and showing results for the year, is appended hereto.

The accounting for the ten institutions shown on the Spread-sheet is done in the Department at Toronto. The requisitions for purchases are all approved of by the Inspector and Chief Accountant before the expenditure is made by the Bursars. Upon the receipt of invoices semi-weekly, they are classified at the Department, and thus uniformity of classification is secured, as well as prompt audit and payment. All goods purchased must go to the Storekeeper at each Hospital, and can be drawn from the store only by requisition duly approved by the Superintendent. These requisitions are made in duplicate, one copy being forwarded to the Department where monthly summaries are compiled so as to show actual consumption of all supplies. The same rule applies to all deliveries of produce from the institutional farm or

garden. At the end of each three months there is a complete statement prepared of Receipts, Expenditure and Consumption. The results are extended on the Spread-sheet to show cost of maintenance per capita per day. Copies of this statement are distributed to the officers and employees in the institutions concerned in making the expenditures involved or in collecting the revenues.

The Spread-sheet is said by those who have had opportunity of making comparison with what is being done here and abroad to be the very best thing of the kind that has come to their notice. It has certainly brought about a uniform method, so that now each Hospital can compare its own results with those of other institutions, and thus learn lessons in costs and economy from the experience of one another. One of the most prominent American hospital officials, in a recent letter, said: "I wish we might have such reports in the United States; then figures would mean something, for they would be based on the same system of figuring."

A brief study of the Spread-sheet for the fiscal year just closed may be of interest. The record of each institution is given for the year, and it is at the same time compared with its own record for the year 1909, together with a record of every other institution for those two years under the same heading, and all carried out to two decimal points of a cent per capita per day. It will be noted that the heavy-faced type represents the aggregate of the light-faced type below it under the same heading, the lighter type simply giving the details that go to make up this aggregate. In the case of "Provisions," for instance, there are fifteen sub-divisions, but the whole fifteen are included in the aggregate in the dark-faced type. Following this item for the purpose of comparison, the cost of "Provisions" at Brockville this year is 12 cents and a fraction per capita per day. Last year it was also a fraction over 12 cents. London and the other institutions run about 12 cents, while Toronto, for "Provisions," runs upwards of 16 cents. A difference of four

cents per capita per day is not much in itself, but with an average attendance of 866 patients, as the statement shows we have at Toronto, that difference of four cents per capita per day amounts to over \$34.00 per day, or about \$12,400.00 per year in this institution alone. Following now the details under the item "Provisions" on the Spread-sheet, one sees at once how the increased cost is made up. It will be seen that Toronto uses butter 2.65 cents per capita per day, milk 1.59 cents, butcher's meat 5.26 cents, while in the other institutions the consumption under these items is substantially less. Why is this? That is a question that is put back to the Superintendent of the institution at once. He is asked to explain. The explanation is given and discussed. And so with other items and other Institutions, the Department always keeping in mind that the standard of service must in no case be sacrificed in order to better the financial showing.

Passing to the item "Heating and Lighting," there is fair uniformity until we come to Woodstock, which is costing upwards of 7 cents per capita per day as against 5 cents in the other institutions. But the explanation is to be found in the small population of Woodstock and the increased space per patient, they all being epileptics and requiring special care and attention.

Again, there is a story in economics told under the item "Salaries." In Brockville, for instance, the salaries amount to 17 cents per capita per day, in Cobourg 24 cents, Hamilton 16 cents, Kingston 23 cents, and so forth, until we come to Woodstock 29 cents. With the population given at the head of each column, the Spread-sheet shows that it costs altogether more per capita per day to pay the salaries account in the small institution than it does in the large. Take Hamilton and Kingston as fairly representing the value of the large institution as against the small in point of expense of administration and salaries. Hamilton has cost for the past year 16 cents per capita per day, while Kingston has cost

23 cents per capita per day, that is, a difference of 7 cents per capita per day in favour of Hamilton. Now, 7 cents per capita per day is not much in itself, but when applied to 600 patients, it amounts to \$42 per day, or \$15,330 per year more for administration and salaries on account of the 600 patients at Kingston than if those 600 were part of a 1,200 patient institution. This means that if we had all of our upwards of 6,000 patients in the various institutions distributed in units of 600 each, they would cost us approximately \$153,000 per year more on account of salaries alone than would the same patients distributed in units of 1,200 each.

The "Farm Recoveries," too, at the foot, tell a very interesting story. At Hamilton the value of the farm produce is 4 cents per patient per day as against 5 cents last year. At London the value of the farm produce likewise shows less than last year, but it is only fair to explain that while some of the farms appear to be producing less per capita per day for the year 1910 than for the year 1909, they have in fact produced much more. The reduction in amount when put into dollars is due to the reduction in values that we have arbitrarily made for the produce of the farm. This reduction took effect at the beginning of the year just closed. The values are now arbitrary and fixed. Since we are our own market we can do this. It maintains uniformity in our accounting and gives value to our comparative figures from year to year. "Farm Recoveries" are all kept on the same basis: for instance, milk 4 cents per quart, potatoes 40 cents per bushel, vegetables at fixed rates, but always well below market price.

Turning to the statement of revenues from patients who can pay something on account or in full, it will be seen that the total revenue per capita per day amounted to 16 cents at Toronto as compared with 5 cents at Brockville, 8 cents at Hamilton, and 9 cents at London.

Coming to the net cost as shown at the foot of the column for each institution, it will be seen that the cost

of maintenance generally has increased, Brockville upwards of 2 cents per capita per day, Cobourg upwards of 1½ cents, Hamilton 2½ cents, Kingston 3½ cents, London has gone up less than one half cent per day; Penetang has reduced its net cost by upwards of 1 cent per day, but that reduction is accounted for by the increased "Farm Recoveries" which certainly are creditable. Woodstock appears to have very large per capita "Farm Recoveries" upwards of 10 cents per capita per day, but this again worked out on the basis of daily average population gives the explanation.

Then it will be seen, too, by turning to the other page of the Spread-sheet, that the appropriations of the Legislature, the expenditure and consumption, are constantly under supervision. The stocks in the stores at the institutions are regularly checked and inventoried from the central office in order that we may know if they agree with the values of the stock as shown by the ledger accounts in the Department. This should be a matter of constant vigilance.

Some of the merits of the present accounting system with the Spread-sheet issued quarterly, carrying forward the operations for the year to the end of the quarter dealt with, are:—

The Spread-sheet, to one who has given it any attention, suggests as well as answers innumerable questions; for instance, the dietary of each institution is on it roughly indicated—the use of medicines in each hospital—the value of furnishing our own light and water—the average population in each institution per day—the per capita per day collections, etc.

The Medical Superintendent and his medical assistants have been relieved of a great deal of accounting that they were formerly expected to do, and are now free to give their attention to the professional side of their work.

The accounting and classification done centrally give uniformity and put each institution in comparison with

its own former records and with all the other institutions as to each item. This should, and I believe does, make for better results,

A direct outcome of the present accounting system with the Quarterly Spread-sheet, is that with the estimates of the Department voted by the Legislature under perhaps 500 different items each year, and involving upwards of one million dollars of expenditure, we have in each of the past two years been able to close the books of the Department for the year with every account paid, without a single item over-expended, without a dollar transferred from one item to another, without a Treasury Board Order to supplement the vote of the House, and without relaxing in any way the effort to improve the standard of service.

The Department has come to regard a knowledge of this Spread-sheet, and of what it is intended to show, as of great importance to every official who has to do with revenues and expenditures, and of greater importance still to the institutions themselves.

INDUSTRIAL ACTIVITIES AT A HOSPITAL FOR INSANE.

W. J. ROBINSON, M.B.

Medical Superintendent Hospital for Insane, London, Ont.

Industrial activities at a Hospital for Insane may, to the casual observer, appear to possess no distinguishing features from those seen elsewhere. While to some extent this is true, there is this great difference that in the ordinary industrial operation the whole idea must be to make a profit, whereas at an insane hospital almost as much importance is attached to the very great benefit derived by patients from the regular and congenial occu-

pation afforded by a multiplicity of industrial operations. Every hospital has numerous examples amongst its chronic patients that show the great improvement that takes place, even in those suffering from a considerable degree of dementia, by regular and constant occupation.

From an economic point of view the various industries connected with any institution are well worth considering, as without them the cost of the support of the different hospitals for insane would be very much greater than it is at present. In connection with the London Hospital for Insane are to be found all the leading trades. Here are to be found a large and well equipped carpenter shop, a machine shop, a tailor shop, a shoe shop, painters, bakers, butchers, dress makers, plasterers and masons, cabinet makers, upholsterers, mattress makers, plumbers, machinists and steam fitters, a splendidly equipped steam laundry, a blacksmith shop, whilst weaving and knitting are by no means lost arts. These industries are indispensable to the well-being of our institution and afford employment to a fair percentage of the male population. Little need be said regarding them, as with one or two exceptions they possess nothing out of the ordinary line of such industries.

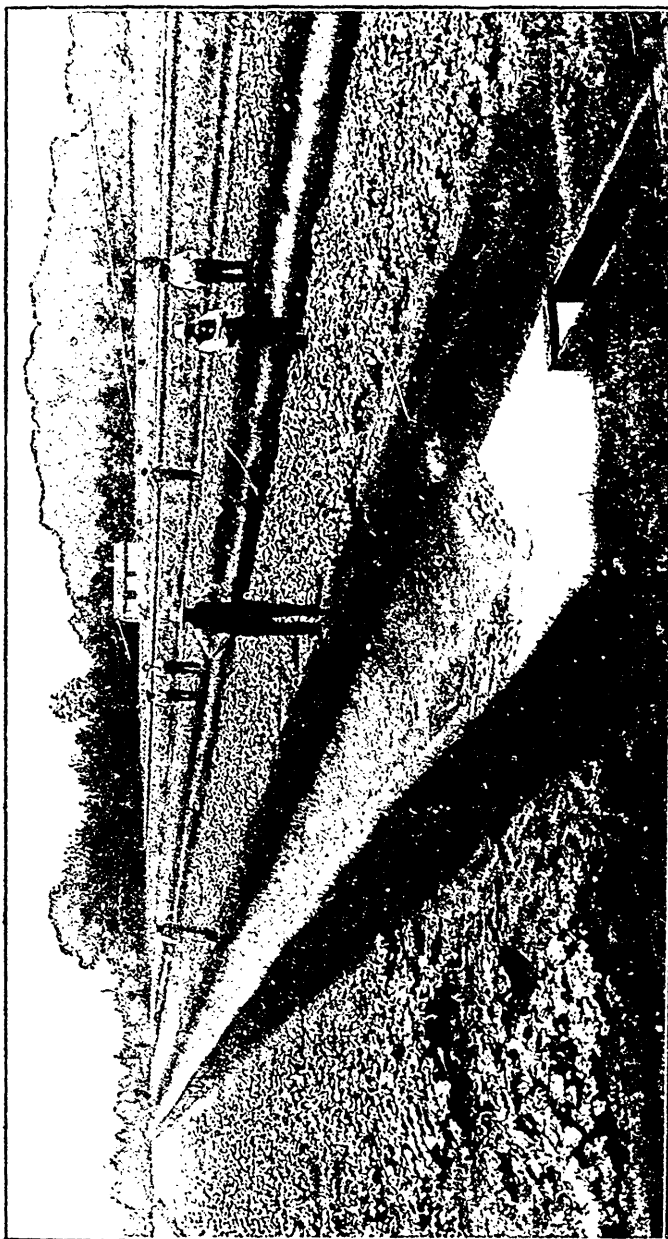
I will endeavour to deal more particularly with the farm and garden and with the various industries arising from them. I am aware that industrial activities usually mean factories and shops of various kinds where raw material is worked up into finished products. A farm and garden properly managed can well be called a factory. All farm products such as hay, oats, corn, barley, roots, and pasture may well be looked upon as the raw material from which is produced milk, butter, eggs, poultry, fresh pork, bacon, ham, beef and veal. I mention these articles because they are the finished product of our factory farm, and it is only in the shape of one or the other of these that any of the products of our farm reach their final market, viz., the dining-rooms of our institution, where 1,250 people, mostly hungry, are fed

every day and three times a day during the year. It can readily be understood that with such a home market our farm is very profitable. Our garden to a great extent produces finished products ready for the table, requiring only a preliminary cooking. Even here, however, the surplus fruit and vegetables which in former times, at certain seasons of the year, owing to the great quantity produced, was often wasted, is now taken care of by means of a small, modern canning plant which was installed a few months ago and of which I shall speak later on.

THE FARM.

The farm consists of 535 acres of land, the greater part of which, by long years of good cultivation, has reached a high state of fertility. One field of 52 acres had, however, been allowed to remain almost in a state of nature, the greater part being low and swampy. In the early summer it was almost covered with water, and towards the end of the season furnishing a certain amount of coarse, rank grass. The whole field was probably not worth more than \$100.00 a year. As an illustration of the value of underdraining this field is most interesting. In the summer of 1909 Prof. W. E. Day, of the Ontario Agricultural College, surveyed this land and gave us a plan for its complete underdraining. Time did not permit us to complete the work fully, but a fairly satisfactory job was done. The field was ploughed, its stumps and roots removed, twenty-three acres of the higher portion was planted in corn, twenty-seven acres of muck land in potatoes, and two acres remained untouched. At a low estimate \$2,000.00 worth of corn and potatoes were produced on this hitherto almost worthless field.

The finished products of our farm are milk, potatoes, butter and eggs, poultry, pork and beans. During the season just ended we produced a large quantity of farm produce. The total yield from our farm during the year and their value at prices current to-day are as follows:



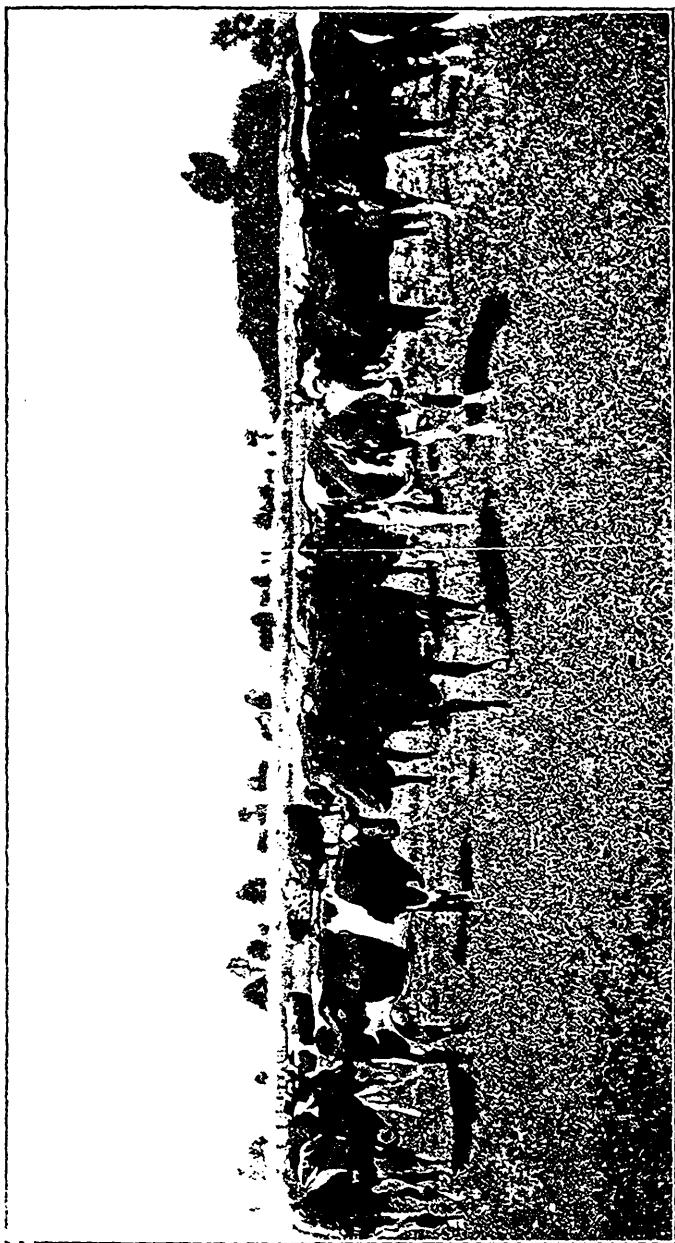
SEWAGE FARM.

Barley, 525 bus. at 50c.....	\$ 262 50
Beans, 60 bus. at \$1.90	114 00
Corn fodder, 50 ton at \$5.00.....	250 00
Ensilage corn, 400 ton at \$2.00.....	800 00
Shelled corn, 1,000 bus. at 50c.....	500 00
Hay, 165 ton at \$10.00.....	1,650 00
Mangles, 240 ton at \$4.00.....	960 00
Oats, 2,110 bus. at 34c.....	714 40
Straw, 80 ton at \$5.00.....	400 00
Potatoes, 7,250 bus. at 40c.....	2,900 00
Pork consumed on the premises, 12,618 lbs. at 8c.....	1,009 44
Pork sold alive.....	1,395 12
Milk produced, at \$1.60 cwt.....	5,996 76
Eggs, 1,003 doz. at 25c.....	250 75
Poultry, 1,083 lbs. at 10c.....	108 30
Bull calf	75 00
Calves	87 00
	<hr/>
	\$17,473 27

With the exception of the beans, potatoes, pork, milk, eggs and poultry all this must be looked upon as so much raw material and it is the business of the factory part of our farm to work it up into the finished article.

THE DAIRY.

The dairy cows are the chief means we have of converting all this great mass of raw material into the very best quality of food. Forty-two of these beautiful and useful animals, mostly Holstein grades, supplied us during the past year with 361,200 pounds of good, clean, pure milk, testing 3.6 per cent. butter fat. In other words each cow produced 8,600 pounds which at our market price of \$1.60 per cwt. averaged \$137.60 per cow. We estimate that the cost of feeding one cow is \$70.00, without including labour, which will probably be balanced



HERD OF HOLSTEINS.

by the value of the manure, so that the very snug profit of \$67.60 was made from each cow. It must also be remembered that at least two-thirds of the food stuff required to keep the cow is grown on our own farm and is sold to the dairy at a very fair profit. To get the best results from the dairy cow she must be fed a balanced ration, that is the food must contain a certain proportion of dry matter and of proteids and of carbo-hydrates and fat. The ordinary fodder grown on the farm such as corn, ensilage, hay and roots, contain an excess of carbo-hydrates and fat and are low in proteids. To balance this, foods such as bran, shorts, oil meal or cotton seed meal which are high in proteids must be added and these concentrates really represent the only cash outlay. Within the past few years a wonderful forage plant, Alfalfa, has obtained a widespread popularity in Ontario. This plant is very rich in proteids; on analysis it is found to be almost equal to bran. Three crops can be produced each year and there can be no doubt but that in a very few years the cash outlay for concentrates will be greatly lessened when the virtues of this wonderful legume are more widely known. On our farm there is at the present time twenty acres seeded to Alfalfa, all of which promise very well. One field of ten acres, seeded in the spring of 1909, produced about twenty-five tons during the past year which is considered fairly good for the first crop. In addition to its great value as a highly nitrogenous food, Alfalfa by means of innumerable bacteria which are found on the little nodules clustered on its roots has the faculty of separating nitrogen from the air and storing it in the soil, thus enriching and fertilizing the land. To successfully grow Alfalfa in land which is not already inoculated a pure culture of these bacteria should be mixed with the seed. If the seed is sown immediately the bacteria begin their work of storing up nitrogen at once. It is found that if no bacteria are present the nodules are not formed and the plant after sickly existence will die before second summer.

The food value of the milk, however, is actually greater than the cash value. It seems pretty well established that one quart of milk equals one pound of beef as food and on this basis each cow in our herd produced last year the equivalent of 3.450 pounds of beef. While this estimate may not be exact, at all events it can be demonstrated that a high class dairy cow can furnish cheaper and better food than any other agency known to man. Owing to the increased productivity of our farm we are increasing our dairy herd to sixty cows and in two years at the furthest we hope to increase it to one hundred.

It must not be hastily assumed that the average dairy cow produces 8,600 pounds of milk each year. The average for the entire province would not exceed much more than one-half this amount. In our herd probably 2,000 pounds have been added to the products of each cow in less than three years. This has been accomplished in two ways, viz., "Feeding and weeding." About two and a half years ago a system of weighing the milk of each individual cow daily was begun. During the first year all cows giving less than 6,000 pounds were discarded. The next year the standard was raised to 7,000 pounds, and now the minimum standard is 8,000 pounds. Every cow which falls below this standard is fattened and sent to the slaughter house. It is expected that an average of 10,000 pounds per cow will be attained in a few years.

One reason for this expectation is found in the fact that the thirteen best cows of our present herd have averaged during the past year 10,240 pounds of milk having a cash value of \$164.84, and the best cow in the herd produced 13,305 pounds valued at \$212.88. It must be remembered that with one or two exceptions all of these animals are ordinary grade Holsteins, none high-priced; the cow which produced the large amount of over thirteen thousand pounds having originally cost only \$40.00.

A third method of improving the quality of the dairy cow, viz., "breeding," is also practised by us but we

have not yet had time to benefit much by this. Formerly all calves born on the farm were sold at once to the butcher for the sum of two dollars. This course is still pursued with the male calves but the females from all our best cows are now being raised and it is by means of these that we expect to be able to increase the herd to one hundred cows.

During the year 1908 our entire herd was tested with tuberculin, twelve reacted and were slaughtered. Since that period irregular tests have been made and we are now making arrangements to inaugurate the Bangs system of eradicating tuberculosis. To carry out this system a second stable on our North farm is being renovated which, when completed, will enable us to at once separate each animal that reacts from our main herd. The milk from cows infected, if we have any, will be sterilized, the animals themselves kept entirely separate, the calves removed at once and fed either with sterilized milk or with milk from the herd which does not react. Of course if any animal is affected to such an extent that the disease can be detected clinically it should be destroyed at once. The Bangs system appears to offer an effectual method of dealing with this disease but involves such an amount of extra labour that it would hardly be practicable for the small farmer.

Our dairy stables have been entirely renovated, all wooden partitions and mangers removed and replaced entirely with cement and iron. The stable is well flushed with water every day and once or twice a year sprayed with strong solution of lime and sulphur. The cows are groomed daily, and immediately before milking the flanks and udders are washed with soap and water. The milkers wash their hands and don clean, white gowns before milking. As might be expected we have an abundant supply of clean, pure milk for our patients. Those who are sick or weak and those recently admitted are given all they can use. To our admission hospital, which

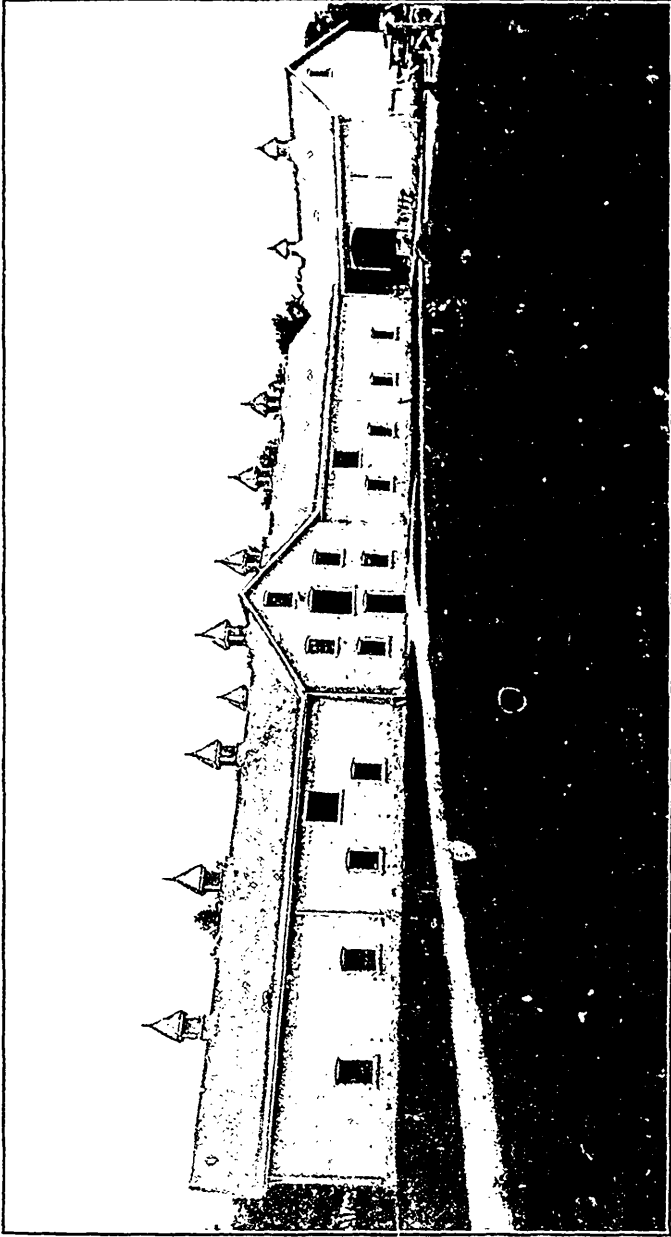


INTERIOR OF COW STABLE.

has an average of 65 patients, seventy quarts of milk are sent daily.

Two problems interesting from a medical point of view have arisen in connection with our dairy herd. The first is contagious abortion which at one time threatened to become epidemic but which appears to be partially under control by quarantining and the use of antiseptics. It is due to a germ which gains access to the uterus of the pregnant cow and causes abortion about the seventh month. The latest theory formulated by a committee of experts in England is that the germ is taken into the stomach of the cow and by some means reaches the uterus. Strict isolation and cleanliness appears to be the only preventive. It is a very serious question for dairy farmers and breeders and is well worthy of investigation by scientists equipped to deal with the subject.

The second interesting disease is "Milk Fever." Within forty-eight hours after calving a cow with scarcely any preliminary symptoms begins to show signs of paralysis of the hind quarter. In less than an hour these parts will be completely paralyzed and the animal will be unable to move and shows every symptom of a terrible illness. Sensation and motion both appear to be affected and it is said the paralysis rapidly extends so as to include the entire body. At all events in two hours she appears to be at the point of death. The eyes are dull and glassy, little or no notice is taken, a stuporous condition rapidly supervenes and coma is not infrequent. To one unaccustomed to the disease it would appear as if death were inevitable and indeed in former days I am told that 90 per cent. died. The treatment consists in distending the udder with pure oxygen gas. In about five minutes the condition of the animal seems to be improved, the eye looks better and more notice is taken; in half an hour there is a decided improvement and in an hour the animal can rise to her feet and appears much better. In a short time she begins to eat and in a few hours seems quite well. Her milk flow returns in



EXTERIOR OF COW STABLE.

about 24 hours and no symptoms of the disease remain. By treatment the mortality rate has been reversed and upwards of 90 per cent. recover. In a medical experience extending over a considerable number of years, I have never seen any disease respond to treatment in the same rapid and theatrical manner as this, and strange to say it is claimed that ordinary air injected with a common bicycle pump will work the same miraculous cure.

THE PIGGERY.

This, at the present time, contains some 250 Yorkshire hogs of various ages, ranging from tiny sucklings a few weeks old to the mammoth old mothers weighing about 500 pounds. The chief food of these animals is the refuse vegetables and waste products from the kitchen. However, this waste is kept at a minimum and for the past year or two we have been obliged to complete the fattening process by the addition of a certain amount of corn and shorts. The grain fed to these hogs will not exceed \$1.00 per head and as their usual worth is about \$15.00 when turned into the pork barrel, it will readily be seen that our piggery produces a very considerable profit. We do not worry about the high or low price of pigs as the inevitable destiny of this animal is to supply us with either fresh pork, bacon or ham cured on the premises and used by our patients.

In the past a certain number of hogs have been sold owing to a lack of cold storage. This, however, is being remedied and it is expected in the future that all hogs will be used at home either in the shape of fresh pork, bacon or ham.

THE HENNERY.

During last year we gathered over one thousand dozen of eggs, all strictly new laid. We have found this depart-

ment a specially useful one as it enables us to provide fresh eggs and egg-nogs beyond suspicion to all weak and delicate patients, and here I might again say that all patients in our admission hospital receive an egg-nog twice a day, something that could not be done if we depended on store eggs. In addition to fresh eggs our hennery supplies us with a large quantity of chickens and ducks for use on our tables. At the present moment we have 96 magnificent cockerels, Rhode Island Reds, Barred Rocks, Black Wyandottes and Buff Orpingtons in crates being fattened to partially provide our Christmas dinner. I may say that on Christmas Day each patient gets all the turkey they can possibly eat and that, as a rule, 2,000 pounds of turkey is required for this dinner. I do not think anyone will complain if a well fattened chicken is given him this year in lieu of turkey.

Beans and potatoes constitute the remaining finished product furnished by our farm. Although we are not situated in the bean belt it was determined this season to plant some three acres with this crop. The experiment was quite successful as some 60 bushels of beans were produced, which will be almost enough for our own use. Potatoes—the only vegetable raised on the farm for table use is potatoes. Some 43 acres were planted which yielded about 7,200 bushels. To these must be added 760 bushels grown in the garden, making in all about 8,000 bushels. This is rather an extra crop and if none decay we should have upwards of 2,000 bushels to sell. Our daily consumption of potatoes is 18 bushels, to which must be added about 600 bushels used for seed.

REFORESTRY.

Our work in this department can scarcely be placed under the "industrial activity heading," at least not for the next 50 years. It is hoped that our experiments in this line will be justified not only by financial results in the distant future but in a much shorter period by the

improvements in the appearance of the landscape which trees always produce. Our north farm includes a considerable portion of very light, sandy soil poorly suited for the production of crops, but admirably adapted for the growth of pine trees. Under the direction of Prof. Ed. Zavitts, of the Ontario Agricultural College, some 2,500 pine trees were planted last spring. This work will be continued each year until fifteen or twenty acres are planted to various kinds of trees, chiefly pine, spruce, walnut, butternut, etc. This experiment will be watched with much interest and it is hoped that it will afford an object lesson which can profitably be followed by many who have a few acres of waste land. Ninety per cent. at least of the trees planted in May appear to have come through the summer in good shape.

THE GARDEN.

This is probably the most profitable of our numerous industries. Altogether we have about sixty acres under fruit and vegetables, divided into the west and east gardens. The former contains some ten or twelve acres and well deserves a chapter by itself as it contains the well known sewage disposal plant, which is familiar to sanitarians all over the continent of America. I shall not describe this plant but the accompanying photograph gives some idea of its arrangement. I may say, however, that it has been in operation summer and winter for over twenty years and, during all that time, all the sewage derived from the Institution has been successfully treated without the slightest offense. On the ridge of land between the trenches all kinds of vegetables grow in greatest profusion. Contrary to the general impression, the sewage has little or nothing to do with the luxuriant growth of vegetables. Excepting for a short period after the seed is sown, when a certain amount of liquid sewage is bailed over the land, no sewage reaches the plant. It



FRUIT ORCHARD.

sinks directly down through the deep bed of sand which underlies the whole field. If it were not for the intensive cultivation the land receives, together with a liberal application of stable manure and artificial fertilizer, this garden, in spite of the sewage, would be practically barren. As it is I feel safe in saying that no similar area of land in the Dominion of Canada produces larger crops.

The East Garden contains about fifty acres of land. Here are to be found all the various kinds of fruit grown in Canada, with the exception of peaches. There are, altogether, about 1,600 fruit trees, many of which have not yet arrived at the fruit bearing stage. For some reason our apple orchard has never been a great success, and many of the trees appear to suffer from some form of bacterial blight. This is common with all orchards where spraying is not practised. Until the present year the quality of our apples was very poor, seventy-five per cent., at least, being injured by the codling moth and various fungus diseases. In the spring of 1910, for the first time, we sprayed our trees very thoroughly, first in April before the bud opened, with a strong solution of home-boiled lime-sulphur. This spraying almost completely exterminated the oyster shell scale with which the trees were badly affected. The second spraying of commercial lime-sulphur and arsenate of lead, which was done just as the buds were bursting; and a third spraying just after the blossom fell, with the same mixture, almost completely controlled the codling moth. As a result of this spraying we had one of the best crops of apples ever grown in the orchard, both as to quality and quantity. This was the more gratifying as in this section of the Province apples were almost a complete failure. I feel justified in saying that this year we had at least seventy-five per cent. of beautiful, large, sound apples, good to look at and good to eat.

It is not possible to enumerate the quantity of the different vegetables produced in our garden. I must, however, mention a few:—

Apples	385 barrels.
Asparagus	3,364 lbs.
Beets	30,682 lbs.
Beans	5,969 lbs.
Cucumbers	4,471 lbs.
Cabbage	82,665 lbs.
Cauliflower	2,900 lbs.
Green Corn	14,664 lbs.
Lettuce	5,055 lbs.
Watermelons	5,680 lbs.
Muskmelons	8,172 lbs.
Onions	24,501 lbs.
Peas, green	3,377 lbs.
Tomatoes	55,869 lbs.

In addition to these, every other vegetable grown in Ontario was produced in abundance. The total value of produce at the price laid down by the Department, which in many cases was very low, amounted to \$4,228.47. It will thus be seen that the cash value of the various products of our farm and garden amounted to:—

Farm	\$17,473 27
Garden	4,228 87
	<hr/>
Total	\$21,702 14

The actual amount of finished products turned out by our factory farm would be as follows:—

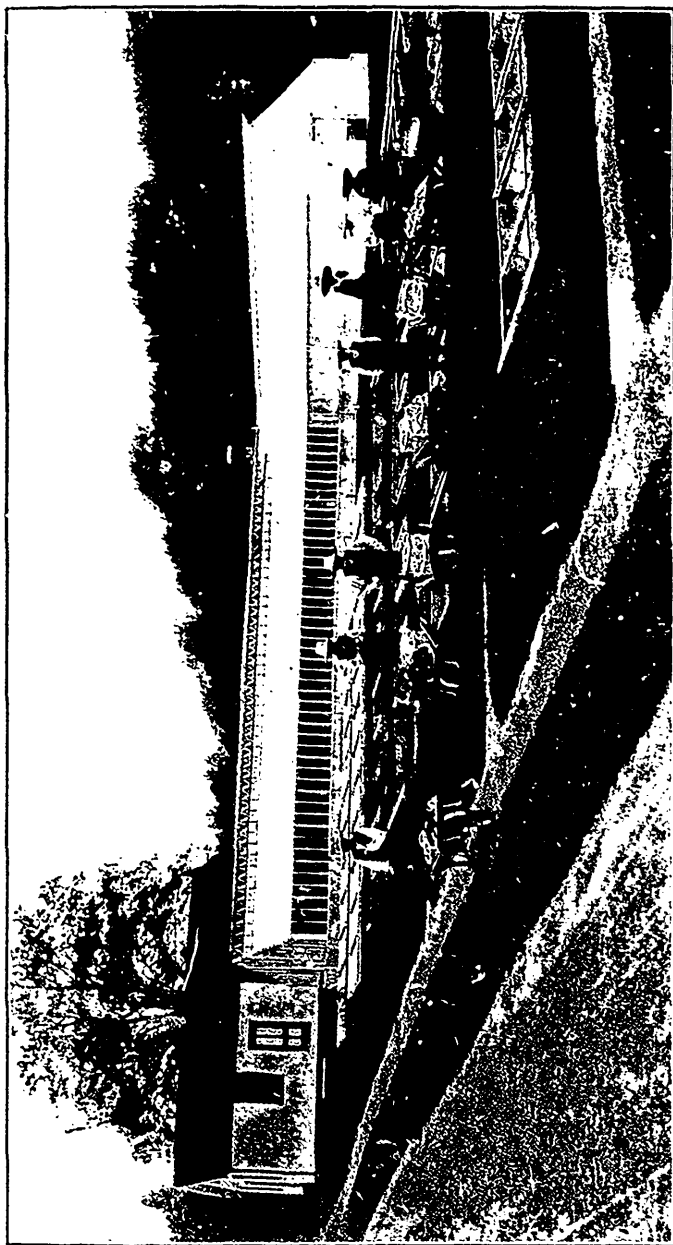
All garden produce	\$4,228 87
Beans	114 00
Potatoes	2,900 00
Pork	2,404 56
Milk	5,996 76
Eggs	250 75
Poultry	108 30
	<hr/>
	\$16,003 24

While the financial returns for the year 1910, from the Farm and Garden, have been very satisfactory, it may be stated that a revised price-list was furnished for this year, materially reducing the price of the majority of articles produced. For the sake of comparison the following list shows the value of the produce at the prices formerly in use.

As mentioned in the early part of this article a small canning plant was installed by means of which we were able to take care of a considerable surplus of fruit and vegetables which, under ordinary conditions, must have been wasted. This plant was an unqualified success. All the labour with the exception of one man at the cost of \$50.00, was furnished by our regular staff and by patients. The following is a list of articles canned, together with their value at present prices:—

Apples, 434 gallon tins, present price..	\$108 50
Beans, 78 3-lb. tins	8 20
Tomatoes, 2,375 gal. tins.....	755 00
Tomatoes, 929 three lb. tins.....	97 50
Plums, preserved, 200 three lb. tins...	52 00
Pears, preserved, 550 gal. tins.....	230 00
Catsup, 182 gal. tins.....	182 00
Chili Sauce, 1,000 quarts.....	say 100 00
Green Tomato Sauce, 1,000 quarts)	
Pumpkins, 480 gallons.....	120 00
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Total	\$1,653 20

This little industry is not only profitable but it gives us a great variety of palatable and even luxurious food for use during the winter months. That all will be required is seen when we consider that it takes sixty gallon cans of tomatoes for one meal for all the patients. These, boiled with a little onion and broken biscuit, make a most appetizing supper. The cost of this supper, if bought in the open market, would be about \$20.00. The actual cost to us is only about \$3.50.



GREENHOUSE AT SEWAGE FARM.

STATEMENT OF 1910 FARM AND GARDEN PRODUCE AT
1909 PRICES.

	1910.	1909.
Barley	\$ 210 00	\$ 262 50
Beans	72 00	72 00
Corn fodder	200 00	200 00
Corn ensilage	800 00	800 00
Corn, shelled	500 00	500 00
Hay	1,320 00	1,980 00
Mangles	960 00	1,200 00
Potatoes	2,900 00	4,445 00
Oats	633 00	735 00
Straw	320 00	640 00
Eggs	250 00	250 00
Poultry	75 81	75 81
Milk	5,996 96	5,996 96
Pork	1,009 44	1,009 44
Hogs	1,395 12	1,395 12
Apples	\$ 288 73	\$ 577 46
Artichokes	6 00	6 00
Asparagus	168 20	336 40
Beans	119 38	179 00
Beets	153 41	204 54
Celery	27 74	27 74
Cherries	0 72	0 72
Currants, black	1 20	1 20
Currants, red	73 45	88 64
Citron	8 00	8 00
Cucumbers	44 71	67 06
Cabbage	619 98	619 98
Carrots	268 68	268 68
Cauliflower	29 00	29 00
Green Corn	73 32	146 64
Egg plants	3 40	3 40
Grapes	3 72	3 72
Gooseberries	25 50	51 00
Lettuce	249 00	498 00

A CASE OF CONFUSIONAL INSANITY. 29

Melon, water	56 80	85 20
Melon, musk	163 44	245 16
Parsley	0 10	0 10
Peppers	2 76	2 76
Plums	8 10	16 20
Pears	80 21	120 30
Potatoes	306 90	460 35
Peas, green	33 73	67 46
Pumpkins	23 40	46 80
Parsnips	116 62	699 75
Raspberries	56 85	113 70
Radishes	40 02	20 10
Rhubarb	32 07	64 15
Strawberries	87 24	109 05
Swiss Chard	65 36	65 36
Spinach	54 59	109 18
Squash	4 53	4 53
Salsify	3 00	6 00
Turnips	151 79	379 48
Tomatoes	558 69	558 69
Onions	245 01	467 98
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	\$20,898 40	\$26,121 31

A CASE OF ACUTE CONFUSIONAL INSANITY.

BY DR. J. WEBSTER,

First Assistant Physician, Hospital for the Insane, Hamilton, Ont.

Following Kraepelin's classification, acute confusional insanity is one of the exhaustion psychoses, but "infective exhaustive" would seem to better indicate the etiology of the case about to be presented. In its earlier stages it was considered an acute delirium, but owing to its relatively protracted course, it has been classified as above.

Mrs. H., admitted to the Hamilton Hospital for the Insane, February 2nd, 1908, aged 46 years.

FAMILY HISTORY.

Father died of apoplexy, aged 60.

Mother died of typhoid pneumonia, aged 53.

Both parents were born in Ireland. There was no consanguinity between them, and neither had a personal history of alcoholism or insanity, but the mother had an insane brother.

They had eight children—five sons and three daughters. One died of Bright's disease, aged forty; one of spinal meningitis, aged 30. One son was twice insane and a patient in this institution during one of the attacks, the form of his insanity being melancholia, and he was discharged recovered.

PERSONAL HISTORY.

Patient was born in Ireland, September 1st, 1861, and came to Canada when very young. She was a bright child, strong and healthy, attentive to her studies and learned readily. In disposition she was excitable and impulsive, but very affectionate; modest, but not shy.

Her education was obtained at a private school for girls, her mother being averse to her daughters going to a school where there were boys. She left school when fifteen years of age, and appears to be well informed and refined. She was a serious child, and as she grew older took the responsibility of life seriously, worrying a great deal, and often being troubled with insomnia. She was moderately religious, industrious, strictly temperate as regards alcohol, and not addicted to drugs.

Previous to her marriage she is said to have had rheumatism, typhoid and "brain fever," and to have been delirious during the acute periods of the two latter illnesses, but particulars are not given. At the age of

twenty-four she married, and has had five children, two of whom are dead—one a premature birth and the other dying of dysentery. The three living are healthy and normal. Patient's married life appears to have been happy, but her husband has not been prosperous, especially during late years, and there have been financial losses which worried her greatly. Since marriage, and until her recent physical and mental illness, patient has been very robust and never seriously ill, and has continued to indulge in athletic sports—tennis, golf, rowing, skating, etc. Her normal weight has been from 125 to 130 pounds.

HISTORY OF PRESENT ILLNESS.

Of the early part of her illness, information is meagre and somewhat conflicting. She was taken ill December 20th, 1907, and is said to have had a complication of pneumonia with spinal meningitis. The pneumonia appears to have developed first, for Dr. M., who was called in consultation Christmas Day, informed me that he found the patient suffering from pneumonia, but there was nothing to suggest spinal meningitis, nor were there mental symptoms. Patient's husband tells me that later, when new symptoms developed, Dr. C. was called in consultation, and diagnosed spinal meningitis. This sequence of events does not agree with that given in the admission papers. However, about January 1st, 1908, after the temperature had been normal for three days, patient complained of great pain in the back of her head and neck. She became unconscious, eyes open, pupils widely dilated and fixed, no movement of eyelids on touching the exposed eye, and the urine was voided involuntarily. On gradually recovering consciousness, aphasia was noticed; she was unable to see clearly, refused food, and delusions, illusions and hallucinations appeared. She accused her husband of having another woman in the house for immoral purposes, mistaking her daughter for

the woman; became jealous of the nurse, and used abusive and foul language towards her, throwing different articles at her. She saw strange shapes on the ceiling and about the room; became suspicious of food, declaring it to be poisoned; wept and laughed in turn, and was affectionate and abusive towards the same person almost coincidentally. She was sleepless, lost weight rapidly, developed bed-sores and became much exhausted. Her memory failed and her ideas were confused.

This description covers the month of January, during which time she was kept at home.

CONDITION ON ADMISSION.

Physical.—Patient was too weak to stand, and weighed only eighty-eight pounds. Complexion dark,



Appearance of patient shortly after admission.

hair iron-gray, head and face well formed and symmetrical, expression "drawn" and very anxious. Teeth irregular but in a fair state of preservation. Tongue thickened, dry and heavily coated—protruded straight. Breath very fetid. Pupils dilated, equal, responsive to light, but for accommodation they could not be tested. Hearing normal. Speech very thick, probably from the

condition of the tongue. Chest well formed. Lungs normal, excepting for a slight roughening of the respiratory murmur in the upper part of the left lung. Heart normal—pulse 94, respiration 20, temperature 98.3. Palpitation of the abdominal viscera negative. Bowels very constipated, and the rectum had to be unpacked before they could be properly moved. Urine contained heavy deposits of urates, otherwise normal. There was evident hyperesthesia all over the cutaneous surface, as doing the hair, bathing her, etc., caused pain. An abscess existed over the lumbar region, and there were several recent scars in the same locality.

Owing to her great restlessness a more complete physical examination could not be made.

Mental.—There was deep clouding of consciousness, and almost complete disorientation. Patient was very restless, crawling about the bed in a purposeless way. She seemed to be in great fear, and continually called "Daddy, Daddy!" clung to those about her and cried, "Don't leave me." It is doubtful whether she clearly comprehended anything that was said to her, judging from her actions and cries, which showed no relationship to her surroundings, yet her attention was strained. Hallucinations seemed probable, but their nature could not be determined. At times she simply cried and moaned.

For three days she could be persuaded to take nourishment if spoon fed, but was very resistive. Once she said the milk was poisoned. On the third day she refused food entirely, and for the next four weeks was tube fed daily, lavage being also employed. Persistent vomiting was a most distressing feature at times, and nutrient enemata were given. Her breath was very fetid. Strychnia was administered hypodermically three times daily, and occasionally normal saline injections were given by the bowel. To induce sleep, frequent hot packs were employed, with occasional doses of veronal when sleep could not otherwise be induced; but as a rule the packs

were very effectual, and while in the pack she would usually drink a couple of glasses of water or milk voluntarily.

Her temperature ranged about the normal, sometimes slightly less, but twice it rose to 100, remaining so for only a few hours. The pulse averaged 95. Urine and feces were frequently voided involuntarily, and the abscess on the back refused to heal. Her weight fell to eighty-six pounds.

This practically describes her condition during the first five weeks of her residence in this hospital.

During the first week in March she showed signs of clearing consciousness, seemed to dimly appreciate her surroundings, began to take food willingly, and increased in weight. The abscess now rapidly healed, her tongue became clean, and she was able to clearly enunciate her words.

By the middle of March, excepting for some confusion of thought which followed any prolonged mental effort, and a partial loss of memory for words, she appeared to be quite well mentally. There was almost complete amnesia for the preceding two months.

A very interesting feature was a form of paraphasia which existed during this "dawn period." At first she was frequently at a loss when attempting to name an object, although she recognized the object when she saw it, or handled it with her eyes closed, and recognized the correct name when she heard it. Later she would give an approximate name, e.g., if she wished a glass of milk, she would say, "I want a glass of " (after some hesitation) "cow." Other examples were "can" for bath, and "feet" for walk. Dr. English she called "Dr. England," and once she called him "Dr. Sweden." Nurse Taylor she called "Miss Cloth," and the head nurse she called "Mrs. Doctor." She recognized the right word when she heard it, and was mortified at what she termed her stupidity.

By April this condition had passed, and she had no difficulty in speaking correctly. On April 4th her weight was one hundred pounds. She gained steadily, mentally and physically, without relapse until May 15th, 1908, when she was discharged, her weight at that time being 115 pounds. Nearly three years have elapsed, and there has been no sign of a recurrence.

So favorable a termination to this case was most gratifying, complicated as it was by so many distressing and exhausting symptoms, and this result was mainly owing to the faithful and skilled nursing which the patient received. Had she been sent to a properly equipped hospital earlier in the course of her illness, probably her recovery would have been more rapid, notwithstanding the fact that her home surroundings were good and a trained nurse was in charge.

HYDROTHERAPY IN THE TREATMENT OF INSANE.

J. C. MITCHELL, M.D.

Hospital for Insane, Hamilton, Ont.

"Hydrotherapy may be defined as the method of applying water in disease. It includes the application of water in any form, the solid and fluid to vapour; from ice to steam internally and externally."—(*Baruch.*)

The use of water in disease is as old as the world itself. This use in the treatment of insanity is by no means a modern idea. We find mention made of it by many of the early writers. We find in a work published in the early part of last century by Dr. O'Halloran, Superintendent of the Hospital for the Insane, Cork, Ireland, on insanity and its treatment, where he lays considerable stress on the benefits to be derived by hot and cold baths

and the use of water in various forms. In the continental hospitals for insane hydrotherapy has been used for many years and occupies a prominent place in their method of treatment. In 1887 after a visit to the continent it was brought to the notice of the profession in America by Dr. Frederick Peterson of New York, and now hydriatic plants more or less elaborate have been introduced into most of the New York and a great many of the American hospitals for the insane. No one has done more to stimulate the interest taken in this form of treatment than has Dr. Simon Baruch of New York and his excellent work on this subject is now one of our text books. Dr. Kellogg, of Battle Creek, Mich., has also produced an excellent text book on the subject.

During the last five years the movement has reached Ontario and owing to the deep interest manifested in our institutional work by the Provincial Secretary all our hospitals for the insane are well provided with the necessary equipment for using this valuable means of treatment in a systematic manner. In our hospital here we have now a most complete outfit, namely, continuous baths, spray, rain, needle, hot air, perineal and Scotch douche baths are all now in use. Our continuous baths are in a separate, well-lighted, well-ventilated room with a tile floor, two tubs in a room, so that one nurse can give her whole attention to two patients. The nurse is expected to be in constant attendance and never to leave the room except when relieved by another nurse. Her duty is to keep the baths at a proper temperature, watch her patients carefully, make notes on their conversation, conduct and physical condition, see that they are lying comfortably on the hammock of the bath tub and that their wants are carefully attended to. The spray and shower baths have been in use since the institution was opened. They are in a separate room and are used for the regular bathing of patients and for general cleanliness. The other baths referred to are in a room specially

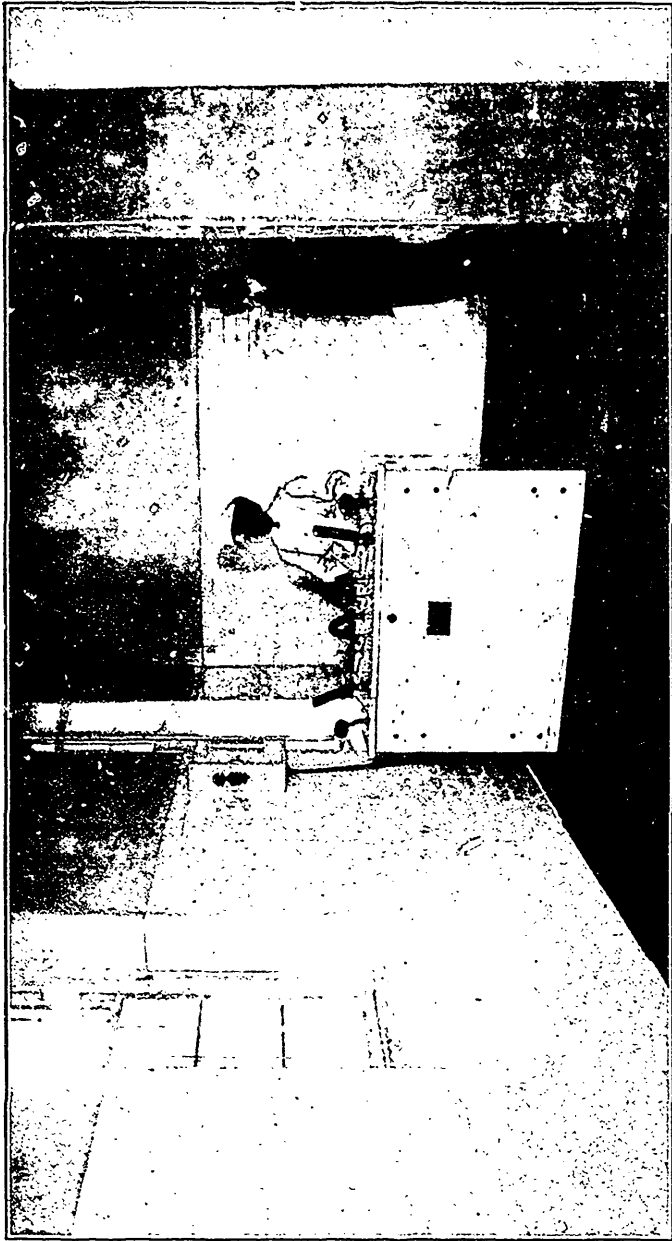


THE CONTINUOUS BATH.

prepared for that purpose. The walls are tiled and the floor prepared to drain off all water. These baths are operated by a control table under the care of a nurse specially trained in this department. In this room a rain, needle and Scotch douche bath can all be given to a patient at the same time, if such is required. The pressure, temperature, etc., are easily arranged by means of the control table.

It is a well known fact that many people are very careless in regard to cleansing the body and do not realize the importance of this remedy in enabling the system to resist disease. The majority of our admissions exhibit in a marked degree extreme neglect in this line and ordinary baths used with continued watchfulness, cleanliness and constant observation always bring a certain amount of benefit.

Hydrotherapy to-day is largely administered on a physiological basis. Water exercises a very important influence over the circulation, the respiratory organs and the nervous system, also a pronounced effect upon the blood pressure. It may be stated in a general way that cold applications raise the blood pressure and warm applications lower it. We all know how rapidly the action of the heart is influenced by the application of heat and cold. The warm bath increases the rapidity of the pulse which persists for some time after the bath. Almost every organ in the body is in reflex relation to the adjacent skin and many of the remote portions. This is the rationale for the application of counter-irritants, poultices, etc. Among the laity the more strongly smelling and odorous articles are often used and seem to please. Fortunately such agents are rapidly going out of favour. Up-to-date physicians know that the same effects can be accomplished through the application of heat and cold by means of compresses wrung out of water at a proper temperature and with pads and other appliances.



NURSE CONTROLLING SPRAY BATH.

Among the effects obtained by water may be mentioned the following: Tonic, sedative, eliminative, diuretic, antipyretic, vasodilator, constructive, etc.

For some years previous to the installation of our continuous baths (these latter having now been in operation for two years) we had to rely entirely in our hydrotherapeutic procedure on our spray baths and on wet packs, sheet baths, etc.

These latter baths can be improvised in any private house as well as in the hospital and if treatment in many toxic and neurasthenic cases were systematically inaugurated and carried out under the direction of a physician and a careful, intelligent nurse, many cases that are now sent to hospitals for the insane for treatment would never require to go. The wet pack properly used is one of the greatest factors at our command in the treatment and restoration to health of the class of cases above referred to. The importance of this form of treatment is so great that we take the liberty of giving the exact details of procedure as laid down by Baruch.

“The technique of the wet pack is as follows: A large woollen blanket is spread upon a hair or other mattress most appropriately placed (if a wire mattress is used a rubber sheet must intervene to protect it from the moisture) upon a high four-legged cot, best located in the middle of the room, so that the attendant may have ready access to it from all directions. A large coarse linen sheet, well wrung out of water of a temperature from 60° to 70°, appropriate to the case, is spread upon the blanket, which should be long enough to extend two feet or more beyond the patient's extremities, and so placed that its left third hangs over the left edge of the cot. (Fig. 1.) The patient provided with a wet turban, now lies upon the cot with arms elevated above his head, so that he occupies the junction of the middle with the right third of the sheet. The latter is now drawn across the body from right to left; its upper portion is tucked

along the left side of the trunk; its lower portion is placed between the lower extremities. The arms are now restored to the side of the body; the left overhanging portion of the sheet is brought over from left to right so as to envelop the arms and entire body, and its border is tucked along the right side. (Fig. 2.) The blanket is now drawn firmly from the left and tucked under the right side of the body, the right border of the blanket being drawn over to the left in the same manner, firmly secured under the body and its upper corner drawn around the neck and secured beneath it. The lower border is firmly tucked around and over the feet. Everything depends upon complete exclusion of air from beneath the blanket cover. The patient is now covered with several woollen blankets, if he is chilly. (Fig. 3.) If the covering has been skillfully done, the patient will resemble a mummy whose head is enveloped in a wet turban. (Fig. 4.)

“Modifications of this procedure consist in partial packs, in which only parts of the body below the axilla are enveloped in the damp sheet. The duration of the pack (which should be from one hour to three hours), the texture of the sheet, the temperature of the water, and the extent of the pack, as well as its repetitions, modify the effect materially as will be seen. All wet packs must be followed by some hydiatric method which restores tone to the cutaneous vessels that have been relaxed by it. Either a half-bath, a sheet bath, or a cold ablution will serve the end and these are selected with regard to the need of each separate case. In institutions the circular bath and douche of 70° to 80° afford a more pleasant because more rapid sequel to the wet pack. The room in which the wet pack is administered should be well ventilated until a short time before the patient is removed.

“Rationale of the Wet Pack.—The first effect of contact with the cold damp sheet is an irritation of the cutaneous nerves and vessels, which induces contraction of the peri-

pheral vessels and which continues until the individual's power of reaction comes into play. This depends, as in all hydiatric procedures, upon the age and condition of the patient; old people and children do not react so readily as adults, and a previous high temperature of the skin furthers rapid reaction, as does also a vigorous normal condition. It should be borne in mind that the wet pack differs from the preceding methods in an important respect. There being no mechanical aid given by attendants, as in the sheet bath or half-bath, reaction depends entirely upon the vital powers of the patient. (This fact distinguishes the wet pack completely from all other hydiatric procedures, and demands judicious recognition of the patient's reactive capacity. For this reason it should not be resorted to until the latter has been ascertained or trained by other procedures.

"As soon as the first 'shock' is over, which lasts from five to twenty minutes, and sometimes produces shivering, the cutaneous vessels begin to dilate; warm blood flows from the centre to the periphery in the effort the system makes to equalize the temperature between the skin and the sheet. When the body temperature is high, as in fevers, there is no chilliness. The cooled blood is at first driven from the surface to the subjacent structures, but very soon the warm blood from the interior takes its place, and dilatation of the cutaneous vessels is the result. This continuous interchange of temperature, which occurs easily and slowly in patients with normal temperature, gives rise to a vaporization from the sheet which, in fever, furthers loss of heat from the skin. The latter is increased by radiation from the blanket, and by the state of rest in which the patient is placed and the consequent formation of a vapour which envelops the entire body. This continues as long as the sheet remains cool and just as long as the thermic irritation is renewed, more feebly each time, until the sheet is thoroughly warmed.

"Under more prolonged application of the wet pack Ziegelroth has found the additional effect of elimination of



APPLYING WET PACK TO PATIENT—1ST STAGE.

toxins. After detailing how the primary irritation by cold arouses a reflex excitation of the respiratory and cardiac centres and how reaction ensues, producing a widening of the cutaneous vascular area, he points out that the skin is so filled with blood and heated by the latter that after an hour the sheet will steam on removal. This hyperæmization of the skin should not be interrupted, but the wet pack should continue three hours. The skin now excretes more actively, producing evaporation into and through the damp sheet. The odour of the latter when removed often bears testimony to this enhanced excretion. The relief felt by most patients Ziegelroth ascribes, aside from the favourable influence upon the circulation, to the removal of toxins. Although this latter claim has not been sufficiently well demonstrated, the odour of the sheets is substantiative evidence."

It is well known that our general practitioners do not, as a rule, use this procedure, but they only have to try it to find out what good results can be obtained.

Hydrotherapy applies not only to the external use of water but to water taken internally, and where it is used in cleansing certain accessible organs of the body. Many of our cases, particularly the depressed ones, come in in a miserable condition—emaciated, tongue heavily coated, breath offensive, sordes on the teeth, etc. Similar symptoms are also found in other forms of insanity, sometimes in mania and some forms of dementia præcox. In many cases the stomach becomes so sensitive that it will retain nothing, and the patient, on account of negativism or certain delusions, absolutely refuses to take food. By introducing the stomach tube, the stomach can be washed out thoroughly with some alkaline solution and this operation can be repeated as often as necessary. Small portions of nourishing food can then be introduced, and in a short time will be retained in the stomach without much difficulty. The mucous membrane assumes a more healthy tone. The appetite returns and the patient goes



APPLYING WET PACK TO PATIENT—2ND STAGE.

on improving. In all these cases the condition of the kidneys and particularly that of the bowels must be carefully looked after. We always begin with one or two doses of calomel followed by salines, and then use aperients as may be indicated. We frequently use in conjunction with other forms of hydrotherapy regular and systematic treatment with normal saline enemata. Many cases treated in this way do not require any catharsis after the first treatment with calomel and a saline. It may be well to give the result of a few cases by the above method of treatment before referring to the benefits received from the continuous bath treatment. These, however, are only a very few out of the large number receiving this treatment.

M. C., a female, aged twenty-four years; born in England; admitted to this institution April 23rd, 1906; weight 100 lbs. She has been an active and industrious girl, with moderate education and average mentality. This attack was post febrile, following measles. When admitted she was talking incessantly, constantly moving, and was unable to answer intelligently any question. She was extremely emaciated, tongue coated, sordes on teeth, skin rough, temperature normal. She was also troubled with insomnia. She was treated with calomel followed by a saline the second morning, and in addition had to be given a hypnotic the first night as she was so excited. She was placed on a good tonic, and was given a wet pack every second day for three weeks. The pack was first given at a temperature of 100°; the temperature was gradually decreased to 60°. After the second pack the insomnia disappeared. She was given normal saline enemas as required and had the stomach washed out once. Three weeks after admission she was gaining steadily; her mentality soon returned and she began to gain in weight. She went home November 15th, weighing 120 pounds. We heard from her periodically for some time and she remained well.

C.M., aged twenty-six years; admitted July 9th, 1906. She was a manic depressive of the manic type, was greatly excited, kept up a continual stream of talk, but was happy and cheerful and laughing at nothing. Her general health on admission was very good; she weighed 164 pounds, being a large-framed woman. At the time of admission there was constant insomnia. She was never given any hypnotics, but wet packs were begun the second day after her admission, and were given every second day for three weeks, at the end of which time she was sleeping well. Her appetite had always remained good, and there had not been much stomachic disturbance. She continued in an excited condition for some time, but slept well. The recovery was slow, and although she was much improved in April, 1907, she was not sent home until June 1st of that year, when she weighed 195 pounds and appeared well in every respect.

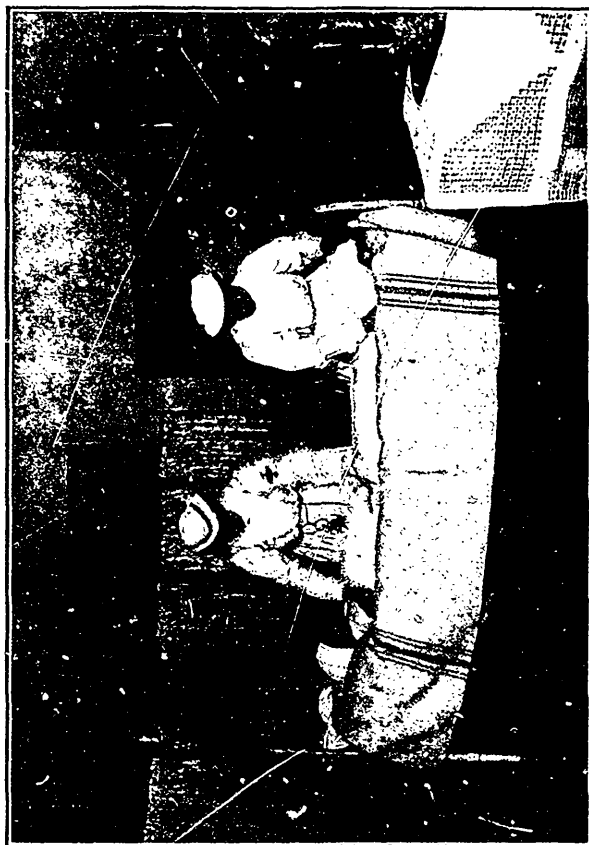
A.D., female, aged twenty-four years; admitted Sept. 24th, 1906; married, had two children, the youngest one only five weeks old. She was a case of exhaustion psychosis of a particularly toxic nature, arising from the puerperal state. She had great delusions of persecution, was fretful, irritable, had turned against her husband and relatives, did not know that her last child had been born, and did not think it was living. She had been very suicidal. She was emaciated, weak and anemic; tongue cracked and coated and some sordes on teeth; weight 100 pounds. She also had insomnia, and was treated with wet packs every second day, beginning with warm, gradually going to colder ones. She was kept in the packs from one to three hours, and for a long time the sheets were particularly offensive. By the 4th of October she was sleeping much better and eating fairly well. She improved steadily but slowly. She was allowed to go home with her husband on February 19th, 1907, weighing 115 pounds. She appeared to be quite recovered and her health was fair. We heard from her several

times, and her friends wrote us that she was entirely well.

M. B., female, aged forty years; admitted May 21st, 1906. This patient had been very ill and came in still wearing a pneumonia jacket. It was a post febrile case, but on admission her temperature was normal. She had still some bronchitis, but lungs were clearing up. She was a large-framed woman and weighing 140 pounds. Her tongue was coated, but she was taking a fair amount of nourishment. She was disoriented and had many delusions. There was also considerable insomnia. She did not have any hypnotics, but was placed in the wet packs as soon as possible, and began to sleep well after the first one. The wet packs were continued for some time, and the sheets were extremely offensive on being removed. The packs were continued for some three weeks, when the patient was very much improved in every way. She was quite rational, and even at that time she was anxious to be at home. She was permitted to go home July 1st, weighing now 155 pounds.

A. P., female, aged thirty-four years; single; admitted January 23rd, 1907. She weighed 110 pounds. There was some insomnia in this case, but her general condition was fairly good. She had many delusions, and at times would refuse food, and did not want to wear respectable clothing. She was only given three wet packs and never any hypnotics. She gradually improved and became quiet and very helpful about the place. As she was diagnosed a case of dementia præcox we thought she was as well as she ever would be, so she was sent home on February 21st, 1907, and has remained well and is getting along very nicely.

M. R., female, aged twenty-seven years; married; had three children. She was admitted on February 16th, 1907, weighing 99½ pounds. This was also a case of exhaustion psychosis following the puerperal period, with markedly toxic symptoms. Her child was born on Janu-

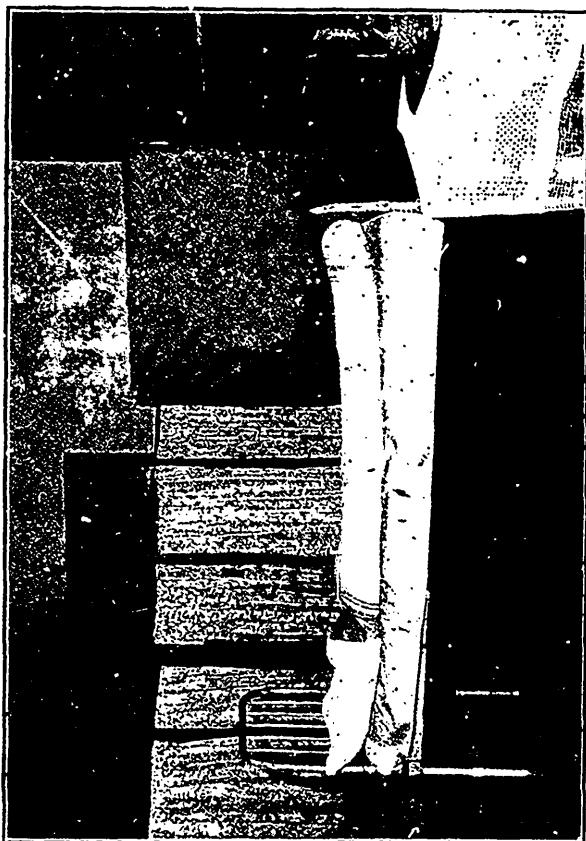


APPLYING WET PACK TO PATIENT—3RD STAGE.

ary 24th. She was very much emaciated, very weak, teeth and lips covered with sordes, breath very foul. She was treated in the same way, but had, in addition to wet packs, stomach washed out, and she was tube fed for nearly three weeks. Normal saline enemas were given regularly with some aperients in addition. In two weeks she was sleeping well and taking a fair amount of nourishment. She improved gradually and soon became intelligent, and made a rapid recovery. She was fully discharged July 29th, 1907, weighing 120 pounds.

H. M., female, aged thirty-one years; single; admitted October 22nd, 1906. She had been troubled with severe headaches, for some months before her mind became deranged. She was a manic depressive of the depressive type. She had been extremely excited, was talking and singing wildly, also had delusions of persecution. (There was extreme restlessness, insomnia and incoherence of speech. When admitted she weighed 119 pounds, and did not appear to be very weak, but seemed to be in a dazed condition. She did not have any appetite. She had the regular routine treatment, and then wet packs every second day for two weeks. Her stomach had to be washed out and she was tube fed for a time, after which she began to eat. She was sleeping well by November 1st. The packs were very offensive until she had had about six, after which the odour was much improved. She went home on February 8th, quite recovered, and a bright, intelligent woman.

E. J., female, aged twenty-two years; admitted December 19th, 1906, weighing 115 pounds. This girl has been suffering from indigestion for some years. At times she had been addicted to the use of alcohol. She had been very irritable for a few months each year for some years, before her admission. She became extremely insane, manifested by great excitement. She had been smashing doors and furniture in her home before she was brought here. At the time of her admission she was talking con-



PATIENT RESTING IN PACK.

tinuously, laughing, singing and screaming. She was much emaciated, tongue was coated, and there was a very foul odour from body and secretions. She was a case of manic depressive of the manic type, apparently of toxic origin. She also had a hereditary history. She had the routine treatment on admission. After the second day she was given the wet pack treatment on alternate days, beginning with warm and gradually going to cold. She perspired very freely from these packs, and the sheets on removal at first were very foul. She had saline enemas and was fed by hand, but did not have stomach washed out. At first there was marked insomnia, but this gradually decreased and she improved steadily. She was discharged on June 4th, weighing 153 pounds, quite recovered. It may be said that this girl remained well and has been extremely industrious, working hard and maintaining a good character ever since her discharge. She had not touched alcohol since. On the first of August of this year she was again run down and had been neglecting her general health. She had another attack, and was brought back here for treatment August 15th. Symptoms were very much the same as the time of her previous admission, though less severe.

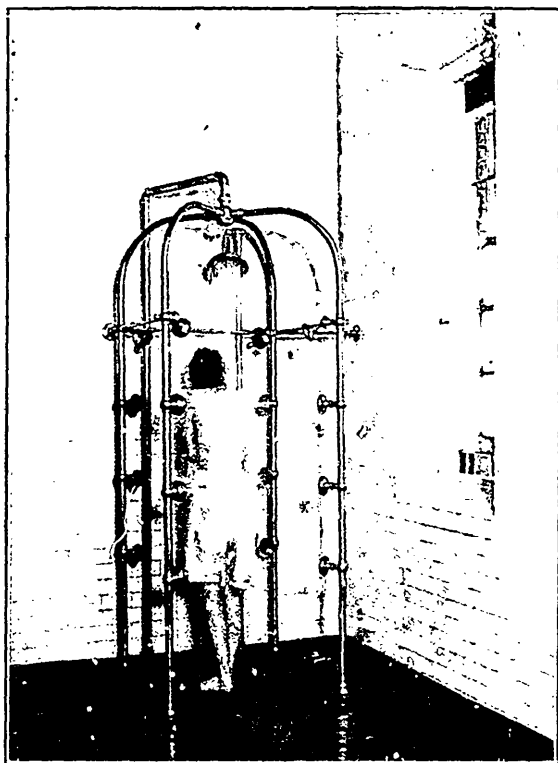
There is another form of baths which can be used in any home, and which has been used here a great deal in connection with our wet pack treatment. This is the sheet bath, and is given as follows: One side of the patient's bed, or preferably a prepared table, is protected with a rubber sheet, and a blanket is then spread upon it. Two sheets, either cotton or linen, a basin, a tub of water and a cup are required. The head and face of the patient must be bathed with cold water and a wet turban wrapped around the head. A sheet is then wrung out of water at a temperature of from 50° to 80°, and the patient placed upon the bed or table and directed to hold both arms over her head. The sheet is then brought around the body below the arms and wrapped completely

around the patient and tucked in between the lower extremities. The arms are then brought down alongside the body and the other sheet made wet and passed around the upper portion, covering in the arms in the same manner as in preparing the wet pack. The first impression will be a shock to the peripheral nerves caused by the sudden contact with the wet application. A deep gasping inspiration and a little shivering follows. Two nurses must be in attendance, and they begin to rub the body and limbs of the patient rapidly, small portions of the body at a time, until patient is well warmed up. One nurse rubs the lower extremities and the other the upper extremities and body. As soon as the body becomes thoroughly warmed water should then be poured from a cup or basin over successive portions of the body and the friction followed up rapidly by the nurse. This is kept up until every portion of the body has been gone over and the patient thoroughly massaged from head to foot. Rigour and chattering of the teeth must always be avoided, as it is an evidence of lowering the temperature too decidedly. This friction prevents the objectionable features of all cold baths, and the patient will not suffer at all from shock or cold. After the treatment is continued from one-half to an hour, then the patient is taken out and may be given a spray, dried thoroughly, and placed in a warm, comfortable bed. This method is of great benefit where there is insomnia, indigestion, or where there is poor circulation. In many of our lethargic cases here we have used this bath with excellent results, not only among our acute patients but with many of the chronics who are suffering, as so many of them do, from imperfect circulation of the blood.

We might quote one case which was treated both with wet packs and the sheet bath and who made an excellent recovery. Her case was apparently quite hopeless when she was first admitted.

M. R., female, aged twenty-seven years; admitted February 27th, 1907. Father was weak-minded, and none

of the family had a very high order of intelligence. This girl had been considered equal in mental ability to any of the others in the family, and had always been very industrious and temperate. Her insanity had developed in October, 1906. When attack first came on she was very excitable and would strike and slap all those around her, without any provocation. This was followed by great depression of spirits and indifference to her surroundings. She refused to speak except when greatly irritated. She lost all her affection for her friends. At times she would cry out without cause, and could be heard by neighbours a long distance away. She would keep up this crying sometimes for hours at a time. She refused to eat, became very much emaciated, and gradually got into a stuporous condition. She had a staring, blank expression. When admitted she only weighed 87 pounds, although she was 5 feet 5 $\frac{1}{2}$ inches in height. She was in a catatonic stupor, and the condition known as *cerea flexibilitas* was very marked. Her tongue was heavily coated, teeth covered with sordes, and the odour from body was very offensive. She would only speak occasionally, and although very weak she would sometime get up out of bed and stand in the room without any apparent reason. The stomach was washed out and she was tube fed continuously until the 10th of March, at which time she began to eat. She had some cathartics, diuretics and numerous saline enemas. She had wet packs continuously every second day for about three weeks, and after that they were given alternately with sheet baths. These latter seemed to do her a great deal of good. She would not sleep at all on admission, but would often lie quietly with her eyes half closed. In a short time she began to sleep, and in two weeks she was getting a reasonable amount. She was kept in bed and had continuous treatment for about six weeks. In that time she had improved a good deal physically, but not mentally. She still acted very foolishly, and was very



PATIENT IN NEEDLE, RAIN AND SCOTCH DOUCHE BATH.

resistive. In October of that year she commenced to talk somewhat more freely, but in a simpering tone. Her appetite at this time was good. She spent a great deal of time out of doors after she had sufficiently recovered. Her improvement continued steadily all winter, and as her people were very anxious to have her at home she was discharged on March 31st, 1908, weighing about 140 pounds. As her case was one of dementia præcox of the catatonic type, we did not consider her recovered, only improved; she has remained sufficiently well to stay at home ever since.

A very large number of cases might be cited from which we have obtained excellent results from the sheet baths.

The continuous bath treatment has been in use in this hospital now for over two years, and we now wonder how we ever managed to get along with our disturbed patients without it. They are certainly handled with much greater ease and our admission ward is much quieter and much more comfortable for the other patients, particularly those who are convalescing. In those baths the patients lie comfortably on hammocks with air pillows under their heads, and are covered by sheets. The water is changing constantly, and is kept at a temperature of from 96° to 100°. Many of the patients enjoy the treatment. They are placed in the tub about eight in the morning and taken out at 4.30 at night, when they are rubbed dry and placed in a comfortable bed. An ice cap is at hand and placed on the patient's head from time to time to keep the head cool. We have found this bath agreeing with even the weakest patients, and have not required to give them any stimulants excepting in the cases where there has been a struggle to place the patient in the bath; then some of them have shown symptoms of cardiac weakness. In many hospitals where there is sufficient help patients are kept in these baths both day and night, but as our nursing staff is not sufficiently large

our patients are only kept in for the length of time above stated. When our staff becomes sufficiently large we will use the treatment at night. Occasionally we have a patient so excited that they cannot be retained in the bath, and then we have to give them wet packs, sheet baths, or whatever form of treatment can be made use of for the case. We have seldom found any case of insomnia that has not been overcome by the use of the continuous bath if kept up steadily, and except in very excited cases have we required to use any hypnotics after the first few days of treatment. The elimination procured by the continuous baths is not as great as that produced by wet packs, and in many toxic cases we frequently use a combination of the two.

The continuous baths are an excellent and convenient form of treatment in the terminal stage of paresis, many forms of ulcer, bed sores and indurations.

The needle spray and Scotch douche used in connection with massage are very helpful to all cases requiring stimulation, such as slowly convalescing, torpid, and any cases with sluggish circulation. Many excited patients are benefited and quieted by the cold needle spray and douche.

We could record in detail the results obtained in a very large number of cases by the continuous baths or other forms of hydropathic treatment, but it is enough to say that all have been benefited to a greater or less degree.

The curable cases under the same methods are less noisy, require fewer drugs, sleep better, gain more in weight, and are generally more amenable to treatment than under the old methods.

Hydrotherapy, with its numerous and varied appliances, adds greatly to our armamentarium and makes our work in the treatment and management of the insane interesting to those in charge and much more beneficial to the patient.

NOTES OF A VISIT TO SOME EUROPEAN
HOSPITALS FOR INSANE.

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Toronto Hospital for Insane.

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It must be evident to any one conversant with institutions for the insane in Ontario that these institutions are rapidly undergoing a complete transformation. Reception wards, searching clinical analysis, improved medical records, institution staff conferences, and the improvement in the education and training of nurses, all show that the dominating principle is a desire to make the institutions for the treatment of mental diseases medical institutions administered on the same medical principles, and with the same nursing ideals as our great General Hospitals, which are acknowledged to be the most perfect product of modern humanitarianism and medical science.

The elevation of asylums from the status of mere custodial institutions to that of modern hospitals in the true sense of the term, necessitates a radical readjustment in methods of treatment and organization. Traditional ideas must be uprooted. Long ago, in Ontario, the most repulsive features in the "past" of asylum treatment have yielded to the fervour of the iconoclast; chains, v. ris-ters, camisoles, cold sprays, apomorphine and systematic neglect, have gone never to return; the solitary single room, whose euphemistic name does not disguise it from its prototype, the prison cell, with lock, key and shutter, is steadily being abolished; in fact, all interested in the care and treatment of the insane in Ontario now adopt an attitude of conscientious, scrutinizing suspicion towards any feature peculiar to asylums.

No doubt it is the duty and the desire of every official in the Ontario service to do his part towards giving full effect to this dominating principle, but in every radical change of this kind so many perplexing problems intrude themselves that any opportunity of adding to our knowledge and increasing our efficiency is welcome indeed. Accordingly, when in August and September last the writer and Dr. Clare were permitted to realize a long and fondly cherished desire to visit the Old World, with its monuments of art and industry, its development incident to centuries of enlightenment, and especially its institutions devoted to the care and treatment of the insane, it was with many anticipations of pleasure and profit that we took advantage of it.

Our tour included France, Italy, Switzerland, Germany, Belgium, England and Scotland. Throughout most of these countries there is a well-beaten path which leads to Salpêtrière, Munich, Claybury, Bethlem and Morningside, etc., and which has been travelled by psychiatrists from this country, both officially as commissions and unofficially as individuals. These institutions are closely associated in our minds with men who wrote valuable treatises, in which as students we were first introduced to psychiatry, and through other channels have contributed richly to psychiatric literature. On this account these are the institutions which first occur to the prospective Canadian tourist in planning his route. However, as the best features of these old and familiar institutions have already been incorporated in the Ontario system, and as we had determined to focus our observations chiefly on those features which pertain to the hospitalization of asylums, we found it advisable to deviate considerably from this course, after having discovered that certain newer, though less familiar, institutions presented a more favourable field for investigation along these lines.

Our first introduction to British asylums was at Claybury, opened in 1893, the first of the London County

Asylums. It is beautifully situated on a hill, about nine miles from the heart of London. It is designed to accommodate two thousand patients, but five hundred more are now in residence, occupying rooms not originally intended for the accommodation of patients. The staff consists of seven physicians and three hundred nurses and attendants. We had an interesting chat with the Superintendent, Dr. Jones, who evidently keeps himself informed on Ontario asylum progress. As an evidence of this he showed us a copy of our classification of mental diseases nailed to the wall in his office. Beside it was one which he follows, which is practically that in general use before Kræpelin's keen clinical insight shattered the traditions of centuries. Dr. Jones' unbending attitude towards the Kræpelin ideas is well known, and it will occasion no surprise that his views were not affected when two inquisitive Canadians pointed out that his classification was simply a list of symptoms and not disease entities. His parting shot was: "Dementia præcox simply means that the patient has been brought to the asylum too soon." If it be true that the treatment of the insane can be divided into three stages—the barbaric, the humane, and the remedial—then institutions of this type, while they contain no relics of the first stage, yet they cannot be said to have advanced so far as our own in the third stage; they are good asylums, but not hospitals. Dr. Jones himself frankly stated that his institution was out of date, although only seventeen years old. The wards are large, cheerful, well furnished and decorated; employment and entertainment of the patients is well provided for; their clothing shows neatness and a pleasing variety, their food is plentiful, wholesome and tastefully served, but there is nothing remarkable in the treatment. A few acute cases were in bed on the verandahs, but there were no continuous baths, and wet packs are looked upon as a form of restraint. There is no "seclusion," but the windows of single rooms are closely shuttered at night; even the front door of the

administration building was locked during the day; the airing courts are enclosed with unclimbable iron fencing, and there appeared to be no "privileged" patients. The day was bright and sunny, such a day as would have turned out nearly the whole of our population, yet the beautiful grounds and immaculate walks had an untrodden, deserted appearance. We believe this must have been an exceptional occasion, for we cannot think that it could be the habit and custom in an institution where so many evidences of humane treatment were observed.

The staff are justly proud of their pathologist, Dr. Mott, and of their laboratory, which is the central laboratory for all the London County Asylums. It is a detached building, with bacteriological, chemical, physical and photographic departments, and a room devoted to experimental psychology, which can also be used for lectures and demonstrations. One of Dr. Mott's assistants was engaged in a series of studies on the chemistry of the cerebrospinal fluid. The mortuary contains an autopsy and specimen room, two rooms for the dead, and a cold room kept below freezing point; there is also a small chapel and a waiting room for friends.

Claybury is an example of the older English asylums, and therefore it will not be necessary to give a description of the other institutions of this class visited.

Our visit to the great European Psychiatric Clinics was at an inopportune time, when most of the famous men who have been contributing to psychiatry the major portion of recent discoveries were absent on their vacation. We are well aware of the fact that the chief aim of these institutions is not to afford prompt and efficient relief to the unfortunate insane; the object, and the admitted object, is to furnish material for clinical instruction to students, and for study and observation by professors connected with the universities. We had a right, however, to expect that there would be due proportion between the quality of the treatment and their universally acknowledged high stand-

ing in clinical and pathological knowledge; we were everywhere disappointed. For example, at Prof. Tanzi's clinic at Florence, we saw practically every excited patient in restraining harness of some kind; the building itself is so strongly constructed and protected with iron gratings that it resembles a fortress more than a hospital. Many of the patients were in solitary confinement. At Zurich, the oldest psychiatric clinic in Europe, and the pulpit from which Jung preached the doctrine of an individual psychology in certain psychoses, individuality is so little in evidence in the treatment of patients that they were herded together in bare, high-walled airing courts, which we in this country have come to regard as a most favourable culture medium for every insane propensity.

The remedial resources of these clinics are far below those of our own or British asylums. Continuous baths are not extensively used, and those which are employed are of a very crude pattern, without hammock of any kind, and without any means of continuous hot water supply. The diet service is inconceivably bad. The wards are spacious and clean enough, but bare and cheerless. While the number of physicians is very large, the number of nurses is much too few, and they do not appear so alert and intelligent as our own. Prof. Tanzi has himself expressed his contempt for those alienists who devote their attention chiefly to pathological rarities, psychological curiosities and anatomical freaks, and yet in his own institution these very things seem to be regarded as more important than the care of the inmates. The patients, along with the microscope and the immunized sheep, are "merely" for demonstration and study, and they do not, as in the public wards of our general hospitals, where they are used for clinical purposes, receive in return the benefit of the very best medical attendance.

The only features in these clinics which interested us were their fine facilities for teaching and research; in

this respect they far surpass the Ontario and British asylums. Their laboratories are very large and complete; in one instance the laboratory building was larger than that which the patients occupied. In addition to the ordinary pathological departments there are rooms fitted with electrical appliances and apparatus for anthropometry, etc.; chemistry rooms with fittings for investigations in physiological and pathological chemistry; a room is reserved for vivisection; a whole floor is devoted to experimental psychology, and is equipped with a bewildering array of ingeniously contrived apparatus for psychophysical experiments and neurological diagnosis. The amphitheatre was furnished with an epidiascope and many other teaching facilities.

At Zurich we saw two interesting cases. One was a young woman who, under the influence of the delusion that her right hand was immoral, had held it in boiling coffee until the lower half of the hand had sloughed away. The other was Jung's famous case of paranoid dementia præcox, his analysis of which has recently been read by everyone interested in clinical psychiatry.

It is refreshing to the practical psychiatrist to turn from these famous European clinics to an institution like Longrove, the most recent of the London County asylums, and the newest and most modern hospital for the insane in England. It is probably better adapted for the carrying out of modern ideas of treating the insane than any other hospital in the world. The essential principle aimed at in the design and arrangement of every building has been to facilitate structurally the work of nursing. To give an adequate description of the plans of this hospital deserves a special paper, and we would commend it to the careful study of anyone who contemplates building a new asylum. As it was at this institution we saw the treatment of acute insanity usual in Great Britain most extensively employed, it might be well to refer to this briefly here. The treatment of the acute, the excited, the destructive cases in Great Britain

is practically our treatment for pulmonary tuberculosis. The patients are placed in bed in the open air for some weeks, both by day and by night; this necessitates verandahs, the most modern of which are built on ground level, with ribbed glass roofs and cement floors, which are never less than twelve feet wide, to allow room for nursing. They are fronted with beautiful grass-covered courts. When they cannot be attached to the building they are built as detached structures. The beneficial results of this treatment were so obvious that we wondered why we had not employed it more extensively in our own country, especially as the necessary verandahs can be constructed with so little structural change or expense. The pure air of the northern latitude is a good guarantee of a good appetite, an enhanced metabolism and better sleep. The high pitched tones of excitement, so disturbing when confined within echoing walls, do not jar the hypersensitive brain when the vibrations are unconfined in the open air. It is claimed that the period of excitement is appreciably shortened and convalescence hastened; also it is evident that this form of treatment blesses the nurse who gives as well as the patient who takes.

The asylums of Scotland are the most interesting, from a clinical point of view, of all the hospitals for the insane across the seas, and the most interesting Scottish asylum is Larbert. That it is so is not because of its being heavily endowed or being well favoured in material things, for in this respect it stands in marked contrast to the magnificence of Crichton Royal Asylum and Craig House. That the Stirling District Asylum claimed so much of our attention and admiration was due to the fact that it seemed to be the most highly hospitalized of all the asylums visited.

Larbert is situated a short distance from Edinburgh. It contains about seven hundred beds. The buildings are one and two stories high, modest in architecture and inex-

pensive in construction, but admirably arranged for nursing purposes.

The system and general organization is one which was originated and gradually worked out by its former superintendent, Dr. Geo. Robertson, now superintendent of Morningside. It is worthy of careful study. The matron is the chief executive officer under the medical staff. To her is entrusted not only the supervision of the house-keeping and domestic departments, as is the case in Ontario, but she also exercises a general control over all nurses and attendants, and the care and treatment of the patients on both the male and female wards. The present matron is a very superior woman, and is universally acknowledged to have exceptional fitness for the position. She is a graduate of the Training School of the Victoria Infirmary, Glasgow, and also holds the certificate of the Medico-psychological Association of Great Britain for mental nursing. Having obtained this dual qualification, she was given an opportunity to demonstrate her ability as a ward matron, and was then promoted to her present position. She divides the work under her direction into nine departments, namely:

1. Nurses' Home.
2. Kitchen and congregat dining room.
3. Laundry.
4. Supervision of night staff.
- 5-9. Supervision of wards during day.

Each of these departments is in charge of an assistant matron, of whom those in charge of the night staff and day wards are required to have certificates of both general and mental hospital training schools. Those in charge of the kitchen, nurses' home and laundry are graduates of schools of domestic science. In Ontario those in charge of the domestic departments have had no nursing training, while in Larbert, no matter where a

patient may be, on ward, in bed, in laundry, kitchen or sewing room, he or she is constantly under the supervision of a person of special training. In most of our Ontario hospitals the supervising staff consists of a supervisor on each ward, over whom is a trained nurse or assistant matron on the women's wards, and a chief attendant on the men's wards. The chief attendant has had no systematic training in nursing, and the supervisor, after being selected for promotion from among her friends, is placed in charge of them, and continues on terms of extreme intimacy with her subordinates. The not infrequent result of such a system is that she does not supervise at all, in the proper sense of the term, and the physician must rely almost entirely on the head nurse and chief attendant to oversee and direct all the wards. The tight discipline, the refinement, the decorum, the efficient nursing and the hospital atmosphere so noticeable at Larbert are due chiefly to the constant presence on the wards with the patients, both male and female, of those refined, educated, highly trained assistant matrons. They wear a distinctive uniform, are given their own department in the home, their own sitting room and dining room, etc. In short, they are elevated to the plane of officers, and therefore are in a position to exert an elevating and leavening influence on the lower and usually weaker ranks, which is not possible under our system.

Another marked feature of this institution is the large number of women nurses employed on the men's wards. From a conservative beginning with two women on the male wards by day, the number has been steadily increased until now about half of the nurses on the male wards are women, and the male sick wards are in charge of women nurses even at night.

What are the indications of success which has attended the system in operation at Larbert? Old and objectionable asylum features have disappeared, and have been replaced by hospital methods to an extent beyond that which obtains in any other institution with which we are

acquainted. Restraint is thus defined by the Board of Lunacy for Scotland: "When a patient is made to wear an article of dress, or placed in any apparatus which is fastened so as to prevent the patient removing it without assistance, which restrains the movements of the patient or the use of hands or feet, the case must be recorded as one of restraint, irrespective of the reason which may have led to such restraint or of its having been used in accordance with, or contrary to, the wish of the patient." It is claimed by the officers of this hospital that no patient has been subjected to such restraint, or has been placed in seclusion since 1902, and in a very thorough inspection we saw not the slightest evidence of the employment of such means in the care of the patients. The keyholes of the inside doors are covered with brass plates, so that it would be impossible to lock them even at night. Constant personal supervision, active, anxious skilful medical treatment have taken the place of these restrictions to prevent the patients from indulging in insane propensities.

On going into a dormitory for acute cases, a patient of the manic type, disturbed by our entrance, sat up in bed and began to indulge in shouting and other manifestations usual with such cases. In an instant a small nurse was at his bedside, spoke to him in a low voice, and with her hand on his shoulder gently pressed him back on the pillow, and the sturdy Highlander was calm in an instant. That gentle word and kindly gesture seemed quite as effective as any of the ingenious, unscientific systems of restraint which we saw in the Italian and other European clinics.

That the employment of women nurses on male wards is fraught with grave dangers is admitted, but these have been obviated by the excellent system of supervision, so that after fifteen years' trial the Superintendent is able to state that he has no accident to record, no assault to describe and no scandal to report. He takes advantage of the fact that most of the insane are facile, open to sug-

gestion and prone to imitation, and the freedom from acts of destructive violence, the absence of unseemly conduct, and the well-cared for aspect of his patients is the result of the cumulative influence of good example and careful nursing by a highly trained staff.

This system of administration is gradually gaining favour; it has been introduced into Bangour, Edinburgh; King Seat Asylum, Aberdeen; at Morningside, and even in some asylums in England. In seven years no fewer than twenty-one of the assistant matrons have been appointed matrons of other institutions. These successes of their predecessors tend to develop an *esprit de corps* among the present nurses, and the prospect of ultimately securing good appointments attracts the very best applicants, so that this drain on the staff is more than compensated for, and now no difficulty is experienced in obtaining suitably trained nurses to act as assistant matrons.

We saw several excellent institutions in and about Glasgow, but probably the most interesting to the Ontario reader is a ward in a general hospital, where insane patients are received; this is one of the props on which is builded Glasgow's reputation of having the best system of disposing of their insane poor in the world. These patients are in the first instance reported to the Inspector of Poor, as persons in need of special care and treatment by reason of mental unsoundness; their names are then sent to a salaried municipal officer called the Certifying Physician in Lunacy, who must visit and examine them within twelve hours after being reported; he finds many of these cases can be treated under his direction without removal from home. If his investigation leads to the opinion that they are likely to be hopeless or lingering cases, they are certified as such and sent to one of the two district asylums at Gartloch or Woodilee. If, on the contrary, they appear to be acute and curable, they are sent, without certification, to a special ward of the General Hospital; here they are treated, and if they recover within six weeks are discharged. If they do not respond

to treatment, and show indications of becoming chronic cases, they are then certified, and sent to one of the district asylums. The time limit of six weeks may be extended in special cases.

The present Certifying Physician is Dr. Carswell, a genial, energetic young man of about sixty-eight years of age. We were fortunate in meeting him on his wards, and his thoughtful kindness in devoting a half day of his valuable time to showing his cases and explaining his unique system is among the most pleasant remembrances of our tour.

The first attempt at treating the insane in general hospitals, in Great Britain at any rate, was in London. Its desirability and feasibility was recognized, and a commission was named to carry out the project, but the movement was strangled by the opposition of asylum superintendents, who saw in the new scheme a menace to their recovery rate. Dr. Carswell, however, saw the immense advantages which such a system offered, and, after fourteen years' agitation he was able to use his influence as an alderman to have a few beds set aside in a poorhouse, for the treatment of selected, uncertified cases of insanity. He was allotted only twelve of the poorest beds in the poorest poorhouse in the district, but in spite of working under adverse conditions, he was able to demonstrate such results as to justify the Parish Council, when building their new general hospital on Duke Street, in erecting a wing of fifty beds, for mental cases, which they placed at Dr. Carswell's disposal. He examines, roughly speaking, 1,000 cases per year; of these he sends 400 direct to the asylums and 600 to the ward in Duke Street Hospital; of the latter 150 subsequently are transferred to asylums and 450 get well and are discharged. What a boon to the poor of Glasgow is this ward, to which the one absolute requirement for admission is the patient's need; and where in every 1,000 cases of mental alienation 450 are treated without the delay occasioned by troublesome legal formalities, without any wound to

their self-respect and without running counter to their prejudice against certification and asylum incarceration.

The ward differs in no respect in appearance from the medical and surgical wards adjoining, nor is there any complaint from the latter of noise or other disturbance from the neighbouring insane ward. The recovery rate, as would be expected from the special selection of the cases, is high; the opposition of the asylum men has now been practically withdrawn, and the medical profession of Glasgow have gradually come to recognize the usefulness of the mental ward.

Morningside—it is not necessary to describe, as under the spell of Dr. Clouston's graphic pen this institution has been made more familiar to us than any other institution outside of our own land; we can only say that, like the Ontario asylums, it too is undergoing transformation, and the successes of its present superintendent in other hospitals augurs well for the future of this institution.

To relieve the overcrowding of their institutions, caused by the accumulation of patients no longer requiring asylum care, it is the custom in Scotland to entrust such patients to the care of families who live within the neighbourhood of the asylum, and who undertake to care for them at a moderate rate, usually \$1.50 per week. It is needless to say that the greatest care is exercised in the selection of both patients and guardians, and that provision is made for thorough supervision. The system seems to be slowly but steadily gaining favour, and there are now nearly 3,000 insane persons cared for in this manner. Last year two regrettable accidents occurred in the case of female idiots thus boarded out, yet the Commissioner states that "those accidents in no way tell against the system—the marvel is that they do not occur more frequently." This attitude is characteristic of the tenacity with which the Scot clings to what he believes to be a good principle. Another example of this trait is afforded by the fact that though, in 1910, two patients met death by throwing themselves through

unprotected windows, yet the fact that two patients among 16,000 suicided in this manner is not considered sufficient reason for putting guards on their windows. Had any of these accidents occurred in Ontario public sentiment would have demanded the entire abandonment of the system which permitted them.

As a result of our observations in these and other foreign institutions, the following are some of the leaves which we think Ontario might profitably take from their book of example:—

1. The general condition of the patients was best in those institutions where hospital features were most prominent, and there is no doubt that Ontario is on the right course in introducing hospital features into its institutions.

2. An institution which accommodates chronic as well as acute cases can be conducted on hospital lines, with a minimum day staff of one nurse to ten patients, and the night staff should be not fewer than one to thirty.

3. The system of supervision in Ontario can be improved by elevating the qualifications and prestige of our ward supervisors. All of them should have both mental and general nursing training. If the comprehensive curriculum of the training schools for nurses of the Ontario asylums is conscientiously followed, then our own schools will produce, independent of the general hospital, suitably trained women for these positions; thus we will avoid, what appears to us, to be the one weak link in the Lambert system of organization.

4. As the natural result of No. 3, and dependent upon it, the exclusion of women nurses from the male wards can no longer be justified; their superiority over men nurses has for years been recognized in general hospitals; our observations lead us to believe that they are relatively just as valuable in the treatment of insanity as in other diseases.

5. Ontario asylums, while not relinquishing any of their present methods of treatment of the acute insane,

should add to their armamentarium a more extensive use of the out-of-door, rest-in-bed treatment.

6. The space devoted to administrative and laboratory purposes should be greatly increased, if Ontario is to take full advantage of her vast material for clinical and research work. We are all earnestly looking for the day when we shall have a psychiatric clinic or clinics, but if these institutions are to have the confidence of the profession and of the general public, they must avoid that great defect in the corresponding institutions in Europe—neglect of their patients in a misdirected zeal for science.

While we saw many things in these foreign countries worthy of our admiration and emulation, it must not be inferred that this country has been laggard in its treatment of the insane. Nowhere did we see so good a system of clinical records as in Ontario, nor do the medical staff place themselves so constantly and intimately into relationship with their patients. Our training schools for nurses have a much more comprehensive curriculum than that of the British Medico-psychological Association, whose examination is taken after an average of only forty lectures, spread over a period of three years. Nowhere is hydrotherapy so perseveringly employed, though its merits are universally acknowledged. Our diet system for acute cases is better than that of any of the public institutions visited. In the matter of nursing we are well abreast, if not in advance, of the best of their hospitals. Everywhere we found a very fair appreciation of Ontario asylum men and methods, and a disposition to regard us as worthy rivals in the race of scientific progress in this and other branches of medicine.

In closing this hurried and imperfect account of a delightful visit, we feel it our pleasure and privilege to record our heartfelt appreciation and thanks for the many courtesies extended to us by the gentlemen connected with the various institutions visited; and if the perusal of this paper awakens the desire in any of our Ontario confreres to visit and examine the system

employed in these hospitals, our experience leads us to say that they will find there friendly, kindly, agreeable men, of large experience and skill, eagerly desirous to turn the pages of the great book of practical exposition to every earnest student, and that in no spirit of arrogance or self-sufficiency, but in the truest desire to show a straighter path and a higher aim in a great department of the art and science of healing.

A CLINIC FOR NERVOUS AND MENTAL
DISEASES.

C. K. CLARKE, M.D.,

Medical Superintendent Hospital for Insane, Toronto.

During the latter part of 1909, through the kindness of the Governors of Toronto General Hospital, who placed a building at our disposal, we were able to open a small clinic, with the idea of seeing what could be done in the way of getting in touch with mental cases in the early stages of the disease.

The work has been done almost entirely by Dr. Ernest Jones, and the results have been more than gratifying. It is evident that in a large city there is a place for this clinic, which is really the first step towards a well organized Psychiatric Hospital.

The fear was expressed by some that this would prove a useless institution, as it would attract neurological cases, which might be cared for and dealt with in a general hospital. A brief perusal of the statistics will prove that this fear was quite unwarranted. It is interesting to note, too, that none of the patients so treated have reached the asylum, thus proving what has been contended, that early treatment is not only advisable but important in many cases.

Dr. Jones reports as follows:

The Out-patient Clinic was opened on Dec. 11th, 1909. The following report refers to a period between then and Oct. 31st, 1910, and of only those occasions on which I was personally present—74 in all. For this period the total attendances of patients comes to 267; the number of new patients 110. If this were calculated on a basis of 12 months it would be equivalent to a total attendance of 371 patients, of whom 155 would be new cases. In the early months, however, the attendances were of much sparser than at present, there being four occasions in two months on which there were no patients at all. The attendance in the last month (October) has been about equal to that of the first three months of the service, and would be equivalent to an attendance of 589 patients a year.

NATIONALITY.

Of the male patients, 14 were born in Russia, 11 in Canada, 10 in England, 4 in Austria, 2 each in Scotland, China, Italy, Roumania and Ireland, and 1 each in Wales and United States.

Out of 40 patients not born in Canada 6 had been in this country for less than two years.

Of the female patients, 28 were born in Russia, 11 in Canada, 5 in Austria, 4 in England, 2 each in Roumania and United States, and 1 each in Scotland and Italy.

Of 43 patients born out of Canada 13 have been in this country for less than two years.

Twenty of the male patients were Jewish and 36 of the female patients.

It is difficult to draw a general conclusion from the statement of nationality, as on the one hand many of those entered to have been born in Russia had resided for many years in England, and might be more properly counted as belonging to the English immigration; on the other hand, some of those born in England were thoroughly foreign and could hardly speak English. The inci-

dence of nationality was without doubt largely affected by a number of factors such as the adjacent position of the clinic to the foreign quarter of the city; again, for instance, the greater proportion of Jews as contrasted with the Italian might be accounted for by my greater conversancy with Yiddish than with Italian. It is well known that a given institution such as the Clinic may largely get known in certain circles more rapidly than in others, particularly, amongst circles such as the Jews who lead a life relatively isolated from the rest of the community.

DIAGNOSIS.

Diagnoses are particularly comparable as they were all made by the same observer and therefore on the same basis.

Male cases :—

Medical*	7
No diagnosis made†	7
Anxiety neurosis	7
Anxiety hysteria	6
Hysteria	4
Neurasthenia, together with anxiety neurosis	4
Dementia Praecox	3
General Paralysis of Insane	2
Chorea	2
Catatonia	I
Parkinson's disease	I
Neurasthenia	I
Alcoholic Psychosis	I
Congenital Idiocy	I
Neuralgia	I
Manic Depressive Insanity	I
Obsessional Psycho-neurosis	I

*Cases not properly belonging to this department and therefore referred to the General Hospital.

†Cases in which the examination could not be carried out with sufficient detail to make a reliable diagnosis.

Female cases:—

Anxiety Neurosis	21
No diagnosis	8
Anxiety Hysteria	6
Medical	4
Hysteria	3
Catatonia	2
General Paralysis of Insane	1
Obsessional Psycho-neurosis	1
Anxiety neurosis, together with obsessional Psycho-neurosis	1
Dementia Paranoides	1
Acroparaesthesia	1
Migraine	1
Narcolepsy	1
Anxiety Hysteria, together with Anxiety Neurosis	1
Hysteria, together with Neurasthenia....	1
Tic	

TREATMENT.

The treatment had to be limited mainly to the following measures: suggestive procedures, and advice concerning the mode of life. By means of these it has been possible to do a considerable amount of good, more than I personally should have anticipated. The facilities for examination and treatment of the patients are exceedingly primitive; there is no quiet room, not even an examination couch, and the work is necessarily of the roughest description. There is no doubt that were these facilities improved, as urgently needs to be done, very much more help could be given to a class of patients that suffer perhaps more than any other, and for whom at present no adequate treatment exists in this city.

RELATION TO ASYLUM WORK.

None of the patients treated at the Clinic has so far been admitted to the asylum; I should not like to claim, however, that none will be in the future. Only one of the patients had previously been in the Toronto Asylum, and I am of the opinion that much good could be done by combining the service with the after care of patients on probation. It would be a great advantage if many such patients were requested to attend for as long as may be thought necessary at the Clinic, so that advice may be given as to the regulation of their life, and early evidences detected of any indication of a relapse.

A CASE OF MILD PARANOIA TERMINATING
IN PRACTICAL RECOVERY.

BY F. S. VROOMAN, M.B.,

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Kräpelin has defined paranoia as a condition in which we find a gradual development and systematization of delusions with full preservation of clearness and generally without hallucinations, a condition which is, moreover, chronic and in which, however, other mental symptoms and dementia do not occur. However, he has later made the assertion that even cases with genuine chronic paranoia, or at least those of paranoia querulous, are capable of cure or at any rate of decided amelioration. In these cases the affect gradually diminishes and fades away. Nevertheless, it is the common experience of those who have opportunity for observing cases of insanity that most of those of the paranoid type and of dementia præcox paranoides run a chronic course with little tendency towards recovery.

Several observers have during the last few years called attention to the fact that a certain small percentage of cases of paranoia of a mild type terminate in practical recovery in a reasonably short time, running a course of from a few weeks to two years. These mild cases are more likely to be treated by a general practitioner or consulting physician than by the staff physicians of the hospitals for insane, who seldom see the very insipient stages of mental disease. As the symptoms of the type under discussion are not severe and duration of the disease comparatively short, such seldom are treated in our institutions. There has been one patient of this type come to my observation. He would probably have not reached our wards had it not been that the domestic circumstances of the family were rather unusual and he could not be cared for by his friends.

The following is an account of a patient admitted to the Hospital for Insane, London, on August 14th, 1909.

He came to us with the following history:

He was said to have been insane at intervals for about one month. During this time he had unjust suspicions of the morality of his daughter. He made various accusations against her based on circumstantial evidence of a very trivial nature. He had the delusion that there were men in the house, and went about searching for them, looking even in the cellar and clothes closets. His daughter said, moreover, that his character had changed completely in a short time. His demeanour was one of suspicion, extreme irritability and passion.

The family history was negative. It may be mentioned here that his wife had been a patient in our hospital for some five years previous to the admission of her husband.

The following is the patient's narrative:

He was born in Canada and lived here all his life. There was nothing unusual during his childhood, and his progress at school was average.

When thirteen years of age he went to work in the confectionery business and remained at this occupation

for five years and one-half. Leaving this he took up the occupation of moulder, and has followed it ever since. During the last twenty years he has been with the same employer and made good wages as a trusted workman. He has been very moderate in his use of alcohol, but seldom taking more than a couple of glasses during the week. (There is no history of specific or venereal disease. He married when about twenty-one years of age, and has one child, a girl, twenty years old.

Since the mental illness of his wife he had not been keeping house, but he and his daughter were boarding, each in a different place. About one month previous to the present attack he bought a house, making a payment and undertaking a mortgage to the extent of \$900. He and his daughter began housekeeping together. All went smoothly at first, and they were very happy in their new home, but he felt the responsibility of his undertaking, and this caused him some worry and anxiety, and, contrary to his usual habit, he became restless and sleepless at night and did not get along as well as usual with his work at the factory. Nothing definite occurred until one evening he and his daughter had been out together making a little visit, and when they returned home his daughter went around to the back door to get the milk which had been left there by the milkman, while he went through the front of the house to open the door on the inside for her. When he attempted to open the door she held it, and he says that this was a very suspicious action. He did not speak about it at the time. One evening shortly afterwards, when his daughter and sister-in-law were sitting on the porch with the patient, there were a number of cats playing at the door-step. The daughter said that she did not understand how these cats got into the house every night. This statement incensed the patient very much, as he said that she went to the door and called them in each evening. About the same time he picked up a book and found in it a note from a young

man asking his daughter to meet him at noon the next day. He watched her, and she went down town at the appointed time, presumably on another errand. The patient felt that this was a very sly and underhand procedure, and that she was deceiving him. He objected to this young man, not that he had anything against him in particular, but that he disliked him in general. A few days later the same young man called for his daughter to go on an excursion, and said that "the girls" were very anxious that she should come down and play the piano for them. He did not believe this story. He thought that if the girls wanted her they would have come up for her. The feeling between him and his daughter was not what it should have been. One night he heard a noise in the house and his idea was that some man had come to see his daughter. He thought that this man was in bed with her, and he could not sleep on this account. He went into her room twice in the night and got into bed with her and stayed awhile. He said that he had no bad thoughts and there was nothing wrong about it, but that he merely meant to guard her. During this time he was working, but his work became rather unsatisfactory. These actions frightened his relatives, and he was transferred to our hospital. Although he did not gain much in weight, his colour and general tone rapidly improved, and he soon began to sleep well. His irritability disappeared and his delusions became less prominent. After about a month's treatment he was taken on probation by friends. He was not convinced that he had been entirely mistaken regarding his suspicions, but, as he put it, "was willing to start afresh and let bygones be bygones." Since that time there has been no recurrence of symptoms, and he has now been living happily with his family for over one year and is working steadily and successfully at his old employment. Although in this case the delusions did not completely disappear, and although the patient did not gain clear insight, he made practical recovery, being able to take his place in life as before.

Doctor M. Friedmann, in a paper on "Mild Cases of Paranoia," cites several examples with histories more or less similar to this which resulted in practical but not theoretical recovery. He states that an endogenous paranoia is curable when the disease is a reaction to a definite cause or if there develops only a single and fixed or over valued idea. The delusions in the case under discussion concerned only the daughter of the patient, and he had no false ideas on any subject which did not concern her. His suspicions and delusions found origin in actual circumstances which, though slight, might give rise to doubts in the mind of an individual of very suspicious makeup.

In diagnosing these mild forms of paranoia from those of manic depressive insanity simulating paranoid disease Friedmann lays considerable emphasis on the fact that in true paranoid cases the delusions develop from within or are, as he expresses it, endogenous. According to his definition, endogenous delusions are, one might say, an exaggeration of the normal mental characteristic of the patient, a continuity of the personality of normal days. The delusion formation can be deduced directly from a fundamental anomaly of character and the intellectual constitution of the patient. Continuity of thought, clear connection with reality and intact logic are characteristic of the endogenous form. There is also present emotional and suggestive clouding of judgment. These endogenous delusions are generally within the realm of possibility, although perhaps highly improbable.

In the exogenous type of paranoid delusional formation the delusions are totally foreign to the normal state of mind of the patient, are absurd, have no foundation, no system and lack all connection with real facts. They are impulsive and not the result of logic elaboration.

The delusional formation in cases of manic depressive insanity with paranoid ideas is of the latter type. These cases are of course curable, complete insight resulting.

In the case of G. J., the delusion formation was undoubtedly of the endogenous type, but unfortunately the history as to the previous life is rather scanty, and I have been unable to establish definitely any pre-existing anomaly of character.

In some few cases, however, where the history of the early life is complete it is not very difficult to trace more or less clearly the delusion formation developing from a normally suspicious makeup. Contrary to what would be expected, I personally have been able to do this most easily in cases of dementia præcox paranoides.

To quote Friedmann again: "We have three forms of endogenous delusion formation."

(1) The delusion formation once started progresses slowly but irresistibly and the affect does not again become calmed down (genuine chronic paranoia).

(2) The delusions remain confined to the conflict, but they fade again and the affect disappears within the space of a few years.

(3) We have nothing more than clouding of judgment of a simple kind and the ideas of reference are few or entirely wanting, conditions which for the most part run an episodic course.

The case cited seems to come under the second heading, and goes to substantiate the statement that an endogenous paranoia may be curable when the disease is a reaction to a definite cause and when there develops only a single and fixed or overvalued idea.

DIET AND DYSPEPSIA.

With a few words about the meat ration in public institutions.

BY ALEXANDER JOHNSTON,

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(Contributed by Special Request.)

When I was in charge of a large institution, a friend of mine who had been visiting several hospitals for the insane said to me one day, "How is it that so many of the employees of large institutions are dyspeptic?" My answer was, "Chiefly because of the dire monotony of institution dietaries, and the indifferent looking and serving of a great deal of very good food."

I think everybody who has attempted to compile dietary tables, either for inmates or employees of institutions, has been confronted with the difficulties alluded to. Of course the variety of food is inevitably somewhat limited, but as a matter of fact the limits are not nearly so rigid as it is sometimes made to appear. In our favoured clime, and with an institution having a large garden and farm, we ought to have a very satisfactory range of food products; while methods of cooking, if properly studied, can give us a great variety of dishes, even if the variety of foodstuffs is limited. What is necessary is earnest, interested thought on the part of *someone outside of the kitchen*, who will prepare a new bill of fare once a week, instead of allowing a bill, which is excellent for one week, to be repeated week after week, sometimes for a whole year.

At the Toledo Hospital for Insane, in Ohio, when Dr. Tobey was the Superintendent, his wife, Mrs. Tobey (who was not on the payroll), used to prepare new bills

of fare for the different dining-rooms every week. These bills were not displayed until the day they were due. Until Tuesday at noon, for instance, no one knew what was for Tuesday's dinner, except the steward and the cooks. The adoption of this plan did away with much of the accustomed grumbling about food.

Individual preferences cannot be consulted in the bill of fare for an institution, as they can be, and are, for a first-class hotel. Practically everybody must eat some of all that is put upon the table at every meal. Now, certain dishes which are very good and nutritious, and may be relished by the majority, will displease some individual. Yet that individual must eat what is provided, or go hungry. Hence, he eats without a relish and loses the great benefit of enjoyment of food as an aid to its digestion. When such a person knows that the dish he dislikes will be served at a certain meal on a certain day, he not only resents the fact at the time of the meal and for a few hours afterwards, but possibly looks forward to it with resentment for a half-day or so beforehand. When, on the other hand, no one except the steward and cooks knows what is to be served until he comes to the table, the grouch lasts for a shorter time, with less injury to his digestion.

The student of dietetics knows that food must be varied in composition, and a due proportion of proteids, phosphates and carbohydrates must be preserved. When we are feeding cattle it is very easy to compose a *balanced ration*, and make sure that the cows have just the food elements they need, whether for milk production or for fattening. The balanced ration for human beings is just as important, but it is much more difficult to compose satisfactorily, because it is much more difficult to induce people to eat the right proportion of the different foods set before them. The articles of food which are richest in proteids are among the most costly; beef, for proteid content and popularity, being the easiest to use. Beans, still richer in protein than meat, are usually acceptable,

but their use must be restricted for digestive reasons. Codfish, dried, the cheapest source of protein, is in some parts of the country very unpopular. The *balance of the ration* must be not merely in the food put on the tables, but on that actually eaten and digested.

In institution cooking we are compelled to use stews and hashes to a much larger extent than in ordinary domestic life. I have known cooks who could make *one* very palatable stew, flavouring it so as to be appetizing, and getting it up so as to present an attractive appearance. But some of these excellent cooks could only make *one stew*, and the consequence was that after five or six—or fifty or sixty repetitions, everybody wished that cook in Jericho and the stew with him. It is, however, comparatively easy to put stew upon the table four or five times a week, each dish being quite distinct from every other in flavour, odour and appearance, while the main elements remain the same. Take for example, first, plain good old-fashioned *Irish stew* made of meat, onions and potatoes, with no other vegetables allowed in it; then replace the potatoes with rice and add tomatoes, slightly increasing the proportion of onions and pepper, and you have an excellent *Spanish stew*, equally nutritious, but entirely different in flavour. Again leaving out the potatoes, use flour for thickening, put in some pickle vinegar and chopped up pickles and add carrots and turnips, and you have a *Hungarian goulash* which is again quite different both in appearance and in taste, and so on with other combinations which take no more work, and cost no more money, but simply require the exercise of brains.

A very popular breakfast dish consists of pancakes and syrup. How to cook pancakes so as to have them hot for breakfast for 450 boys and girls in two large dining rooms seemed an impossible problem. Yet with a large restaurant griddle plate, heated by gas and with room on it for 24 fair sized cakes at the same time, then dividing the serving so as to furnish cakes for breakfast

for the boys on one day, and the girls on another, the matter was made comparatively simple.

I once found an employees' dining room in a large institution where they had had beefsteak for breakfast 364 days in the year for four years. The only variety was on Easter Sunday of each year when they were given boiled eggs. In the same dining room pasty, unpalatable rolled oats was served every day and mostly wasted. The only redeeming feature about the breakfasts was that every second or third day there were hot biscuits, and that there was usually some stewed dried fruit on the table. When they began to get eggs and bacon, fried sausages, griddle cakes, fried liver and bacon, broiled ham, fish once a week, and other such varieties (which never cost more than the beefsteak and many of the items cost less) the call to breakfast took on a new attraction; and when the fruit season came in and there were either fresh strawberries or fresh blackberries, or melons, or grapes, then the attraction was still greater. I have sometimes wondered whether it would not be feasible in an institution to put the meals, for the employees at any rate, on the European plan. Allow each person so much per meal, and charge each item, giving a good variety of choice each day. However, we are still a long way from such *a la carte* service.

One of the things that often comes up in dietary scales is the proportion of meat that shall be used. It is easily possible to be very extravagant in this respect. An interesting incident occurred in a large institution for defectives some years ago. The Superintendent was giving a large amount of personal attention to the bills of fare, and he had reduced the amount of meat to what he believed to be a reasonable minimum. One day he received a letter from the Secretary of the State Board of Charities enclosing a table showing the amount of meat, per capita, by weight and cost, used in the thirteen institutions of the State. One of the hospitals for the insane headed the list with 19 ounces per diem per

capita. His own school for feeble minded was at the bottom of the list with seven ounces (the United States Army ration is 16 ounces of beef, or 12 ounces of pork per day per man). There was no criticism *expressed* by the Secretary, but the Superintendent was asked his opinion on these different amounts.

The Superintendent answered the letter by first giving a table of the changes in weight, during the year, of all children and adults, in his care compiled from the monthly weighings. This showed a satisfactory gain for nearly all those of growing age, and a satisfactory status for the adults. He told the Secretary that in his opinion a steady increase in weight accompanied by good complexions and bright looks in children who are given plenty of outdoor exercise and unlimited access to good drinking water is a positive criterion of adequate nourishment. That he, the Secretary, knew by his visits of inspection whether the children *looked* well. He then told the Secretary that in his opinion, especially with children, the purposes of meat in an institution dietary was rather to furnish flavour than sustenance. He reminded him that many of the children in that institution were quite small, and there were many epileptics, also that the amount of milk that was being used was considerably above the average of most of the other institutions. He pointed out that to criticise an institution dietary much more than a mere knowledge of the per capita proportion of meat issued from the cold storage is necessary.

The Superintendent then went on to tell that some of the strongest and most robust races of men use very little, if any, meat; that there are a large number of people in the world who are vegetarians and still are healthy and able-bodied. He then told him he would give him an ancient and a modern instance of vegetarian diet with the results. The modern instance occurred in Germany during the previous summer. There was a 100 mile road-race ending at Berlin in which there were 95 contestants. It happened that the first seven to arrive

at the goal were vegetarians. The ancient instance was the well known case of Hananiah, Mishael and Azariah, whom the Babylonians re-named Shadrach, Meshech and Abednego, the three Hebrew children mentioned in the Book of Daniel, who, when they refused to eat the king's meat and drink the king's wine, preferring to be fed upon peas and beans, not only showed clearer complexions and better flesh than their carnivorous competitors, but also developed a most remarkable ability to stand fire.

That Secretary never answered the Superintendent's letter.