longer sections, can transmit messages at the rate of nine times faster, or, indeed, any faster than the direct Ireland to Newfoundland cable. The fact is, that a very large staff would have to be kept at the terminus of each section, and every message would at each terminus have to be read off, and re-transmitted to the terminus of the next section, and thus every message and signal would have to be repeated eight or nine times at least during its transit from London to New York, and the result would be that, with all its apparent advantages of short circuits, it is very problematical whether intelligence could be sent to America by the northern route even at as good a speed as by the direct Atlantic cable properly constructed and laid.—*London Mech. Magazine.*

GOVERNMENT AID TO SCIENCE IN ENGLAND.

The following statement of the sums paid for scientific objects, or to scientific men, by the government, is taken from the "Civil Service List" for March, 1860:

Royal Mint—Master and Worker	£1500
Science and Art Department—Secretary and Superintendent	1200
" " Assistant Secretary	775
Queen's College, Cork—President and Director of Irish Museum	1200
Director General Geological Survey, and Director of Geological Museum	1100
Astronomer Royal ... ... House and	1000
British Museum—Superintendent of Nat. Hist. Department	800
" Keeper of Zoology	500
" Keeper of Mineralogy	500
" Keeper of Botany	500
" Keeper of Geology	500
Director of Kew Botanic Gardens	800
Registrar of London University	800
Superintendent of Coining	700
Woolwich Arsenal—Chemist	700
" Assistant	280
Inland Revenue Laboratory—Principal	600
" Assistant	300
Queen's College, Belfast—Vice President	500
Superintendent of Nautical Almanack	500
School of Mines—Lecturer on Chemistry and Chemist	300
" Lecturer on Physics	200
India Office—Reporter on the Products of India	500
School of Mines—Lecturer on Natural History, and Naturalist to Geological Survey	625?
School of Mines—Lecturer on Geology, Local Director of Geological Survey	550?
Geological Survey, Ireland—Local Director, Lecturer on Geology, Museum of Irish Industry	650?

The following summary of the sums required for the Department of Science and Art for the years ending March 31, 1861 and 1862, shows well what the Government now does as compared (not with the time when the Royal Institution was founded, but) with the year 1843, when the Grant commenced with £2,008 for the Museum of Economic Geology:

	1861-2.	1860-1.
For General Managament in London	£4,705 0 0	£4,560 0 0
For Schools of Art and Science in the United Kingdom, South Kensington Museum, Library, &c	76,405 0 0	77,415 0 0
For School of Mines, and the Geological Museum, Jermyn St. London	6,387 2 6	6,417 2 6
For Geological Survey of the United Kingdom	10,798 1 6	10,317 19 6
For Industrial Museum for Scotland, including the Natural History Museum, Edinburgh	1,931 12 0	1,943 16 0
For Royal Dublin Society	6,000 0 0	6,000 0 0
For Museum of Irish Industry and Provincial Lectures in Ireland	4,956 16 0	4,996 16 0
Royal Hibernian Academy	300 0 0	300 0 0
	£111,483 12 0	£111,950 14 0

The sums actually expended in the year ending March 31, 1861, for Scientific Education and connected matters, and National Collections, were £221,851:—

British Museum	£92,800
National Gallery	10.348
Scientific Works and Experiments	3.488
Science and Art Department	97,472
Museum of Practical Geology	6,705
* Royal Society	1,000
Geographical Society	500
Portrait Gallery	1,538

The extension of education in Natural knowledge, since the founding of the Royal Institution, is also shown by the changes which are taking place in the Universities and Schools quite independently of the Government.

In the University of London degrees have been granted in Natural Knowledge since 1860.

At Oxford there are Professors of Chemistry, Physics, and Geology, receiving now a fixed income of £310 each, which it is proposed to increase to £400 yearly.

There is a Professorship of Natural Knowledge at Magdalen College, which soon will receive £600 yearly.

The Linacre Professor of Physiology will soon be paid, by Merton College, £800 yearly.

At Cambridge, a Chemical Laboratory has been opened at St. John's College; £150, with the fees are given to the Director, who is a Fellow of the College.

And the Professorships of Chemistry, Anatomy, Botany, Geology, Mineralogy, and Mechanics, have recently been raised to £300 a year each, besides fees for lectures, the amount of which varies.

COMMERCE AND TRADE OF THE LAKES.

Statement of the tonnage of the North-Western Lakes and the St. Lawrence River, as compiled from the Marine Register of the Board of Lake Underwriters.

UNITED STATES TONNAGE.

Description.	Number.	Tonnage.	Value.	Men'
Steamers	71	40,125	$1,493,300	1,775
Propellers	182	56,503	2,597.100	3,640
Barques	44	18.331	447.300	528
Briggs	70	20,613	407.600	770
Schooners	789	174,015	4,496.800	7,890
Sloops	10	345	5,750	40
Total	1,166	309,632	$9,447,850	14,346

CANADIAN TONNAGE.

Steamers	76	24.544	$1,175,600	1,900
Propellers	21	4.748	207,800	420
Barques	18	6,787	189,500	216
Briggs	16	4,258	93,500	176
Schooners	200	30,885	752,100	2,000
Sloops	5	283	6,100	20
Total	336	71,505	$2,414,600	3,732

TOTAL U. S. AND CANADA TONNAGE.

Number of vessels	1,502
Total Tonnage	381.137
Total value	$11,862.450
Total number of men	18,975

It will be seen by the above that the United States tonnage exceeds that of Canada as follows:—

Excess in the number of vessels	830
Excess in the amount of tonnage	238,127
Excess in value	$7,033.250
Excess in number of men	10,911

VESSELS BUILDING IN 1862.

Below we give the number of United States and Canada vessels now building on the North-Western Lakes and the St. Lawrence River:—

UNITED STATES VESSELS BUILDING.

Rig.	Number.	Tonnage.	Value.
Steamers	3	1,700	$119,000
Propellers	22	8,210	574,700
Sail	32	21,040	947,205
	57	30,950	$1,640,905

* See subsequent Note.