

The office of Copy Rights, Trade Marks, and Industrial Designs, has been recently separated from the Patent Office in consequence of increase of business, which may be expected to continue to grow with the progress of the Dominion.

This separation has taken place under two Acts of the Dominion Parliament, which may thus be briefly described:—

The "Act respecting the marking of timber," obliges every person engaged in the business of lumbering or getting out timber, and floating or rafting the same in the inland waters of Canada, within the Provinces of Ontario and Quebec, to register the mark or marks adopted by the owners to distinguish such property.

The copyright Act requires that every applicant for a copyright must accompany his application with two copies of the work intended to be copyrighted. One of these copies is deposited in the hands of the Librarian of Parliament, the other is kept of record in the office of copyrights.

The number of books, pieces of music,

paintings, photographs, and statuettes already deposited in the Department of Agriculture, now amounts to 160.

The following table shows the number of copyrights registered, certificates of copyrights, trade marks registered, certificates of trade marks, industrial designs, and certificates of industrial designs, timber marks registered and certificates of timber marks, during the year 1870, as compared with the two previous years:—

	1868	1869	1870
Copyrights Registered.....	34	62	66
Certificates of Copyrights.....	34	62	66
Trade Marks Registered.....	32	50	72
Certificates of Trade Marks...	32	50	72
Industrial Designs Registered.	6	12	21
Certificates of Industrial Designs.....	6	12	24
Timber Marks Registered.....	.....	.....	190
Certificates of Timber Marks..	.....	.....	190

## Scientific Items.

The following is a brief extract of some scientific discoveries, &c., of popular interest; and is proposed in future numbers of the *Year Book* to make an Annual Register of scientific discoveries a feature of interest:—

**TO TEST PETROLEUM.**—According to a writer in the *Scientific American* the storage of refined petroleum, if pure, is not dangerous, even in large quantities. It is not so inflammable as alcohol. It does not "flash" and does not ignite until it is heated to 100° or 110° Fah. It does not form gases or vapors, and evaporates very slowly even when exposed in shallow vessels. It is the adulteration with naphtha, &c., which renders it explosive and dangerous. To test purity, neither colour nor taste can be relied on. The only reliable test is the temperature of the "flashing" point. To apply this pour the oil to be tested into a saucer, about half an inch deep, then hold a burning match or tape near the surface. At the point of contact the combustion is often very lively as the tape draws up some of the liquid; but if the petroleum be free and safe from naphtha, the flame does not spread over the surface. If the petroleum has been adulterated, as soon as the match touches the surface, a blue lam-bent flame flashes across it, and in a few moments the body of the oil will be on fire. Such an oil is dangerous—liable to explode in lamps and give off inflammable vapor at all times. Any oil which takes fire over the whole surface when a match is held near its surface, and continues to burn ought to be at once condemned and thrown into the street. The writer lays stress on this experiment, because he has actually seen a country dealer pour petroleum into a saucer and ignite it in this way as a proof that it was not dangerous! If there were a right legal inspection of petroleum it might save many lives and much property, and be a great protection to the community.

**NEW SPRINGS AT BATH, ENGLAND.**—A leakage occurring in the hot springs of the King's Bath, at Bath, in making excavations to discover the cause, two new springs were discovered, 22 feet below the surface, at a tem-

perature of 110 degrees, and yielding 20 gallons a minute.

**IMPORTANCE OF CLEANSING THE SKIN.**—If a coat of varnish or other substance impervious to moisture be applied to the entire skin, death will take place in about six hours. If the fur of a rabbit or skin of a pig be covered with a solution of India rubber in naphtha, life will cease in a couple of hours.

**POLISHING FLOORS.**—Instead of wax, soluble glass is more employed for polishing floors. The floor is first well cleaned, and the cracks filled with a cement of water, glass and chalk or gypsum, then a water-glass of 60 to 65 degrees of the thickness of syrup is applied with a stiff brush—colouring may be imported in a second coat, and additional coats given till the requisite polish is attained. By pumicating the last layer, and putting on a coating of oil, a still higher finish may be given.

**IRON PAPER.**—The mill manager of the Upper-forest Tin Works, near Swansea, has succeeded in making a sheet of iron paper the finest in appearance and the thinnest yet made. The iron was made on the premises. It was worked in a finery with charcoal and the usual blast; then taken to the hammer to be found into a regular flat bottom; thence conveyed to the balling furnace, when sufficiently heated, taken to the rolls, lengthened and cut into proper lengths, piled up and sent to the balling furnace again, when heated, passed through the rolls, and back again to the furnace, and when brought to the proper pitch, back to the rolls, and made into a thoroughly good bar. It was then taken to the tin mills, and rolled, passed through the cold rolls to give it the polish, and now stands the thinnest sheet of iron on record. It is 10 in. by 5½, and weighs 20 grains, and would require 4, 100 to make an inch in thickness.

**ELASTIC AND SWEET GLUE.**—Good common glue, dissolved in water, on a water bath, and the water evaporated till the glue is of thick consistence, Glycerine, equal in weight to the glue to be added, and the heating continued till all the water has been driven off when the