in no case shall a member vote for more candidates for any one province than the number designated on the ballot to be elected for that province.

"And that Section '35' shall be amended by adding

the following:-

In the case of ballots cast for councillors, the decision as to who have been elected shall be arrived at independently for each province. The number of candidates to be elected for each said province, as stated on the ballot, who receive the highest number of votes shall be declared elected. In case of a tie, the scrutineers shall decide."

## THE FLOTATION PROCESS.

A correspondent of the Boston News Bureau has

contributed the following to that journal:-

While the new flotation process worked out by the Jackling metallurgical engineering staff has been introduced in the porphyry copper plants and the Butte & Superior mill on a small scale, it has been guarded with the greatest secrecy. Some of the results have leaked out, and in mining circles it appears to have produced as great an effect as the first discoveries of reducing the low grade copper on a big commercial basis.

The new process is said to have demonstrated that Utah Copper, Chino, Ray and Nevada Consolidated can recover 6 to 7 pounds more copper to the ton than under the old process. The recoveries will amount to from 25 to 28 pounds of copper to the ton, and Utah Copper, when operating both its mills at capacity, will be able to show a cost as low as  $4\frac{3}{4}$  cents a pound, according to the estimate made by the metallurgical engineer in charge.

The recovery of the by-products, silver and gold, will be almost doubled. It is said that at Nevada Consolidated, where one of the new machines is being used, the gold recoveries have been raised from \$1 to better than \$2 a ton. The recovery of all values is so complete that assay of tailings in some instances shows only 15-100ths to 25-100ths of ½ per cent. copper contents. Thus it will be seen that better than 95 per cent. of the ore content is being extracted.

At the Butte & Superior where one unit has been operating, the management reports an increase in the earnings of \$13,000 a month. Utah Copper is said to have shown an increase of \$48,000 in one month with one of the new units, and Nevada Consolidated with one unit operating raised the recovery of the entire plant from 68 per cent. to about 71 per cent. As compared to as much as 16 pounds of copper per ton in the tailings, it is said that at present the tailings show only about  $2\frac{1}{2}$  pounds of copper.

Some of these machines are in operation at each one of the Jackling mill plants. The engineer in charge of this installation says that all the mills will be completely equipped with the new process during the year, and that mining companies who have learned of the success of the new machines are giving orders

faster than they can be turned out.

## JAPAN BUYING COPPER.

It is reported that Japan has just purchased in the United States 25,000,000 pounds of copper and taken option upon another large lot.

There is some surmise that this is in connection with the manufacture of arms and munitions of war for account of Russia.

## NOT GERMANY.

(Theodore C. Williams, in Life.)

Who first put steam to ship and car And conquered space on land and sea? Who cabled thought through oceans far? Not Germany.

Who first trapped microbes under glass.

Man's ambushed, deadliest enemy,

And bade foul plagues forever pass?

Not Germany.

Who from Daguerre his fame can steal?
Who finished for the world to see
"La Bicyclette," "l'automobile"?
Not Germany.

Who set the wheel where women spun To million-fold machinery? And what proud land bore Edison? Not Germany.

Who laid on pain deep sleep and dark
To still life's utmost agony?
Who flashed world-o'er the wireless spark?
Not Germany.

Who first like eagle rode the air, Columbus of that vaster sea? Who first to earth's twin poles did fare? Not Germany.

But higher yet what lands display Darwin's supreme discovery, The Curies, Lyell, Faraday? Not Germany.

Who broke th' hereditary throne Of kings, and set great peoples free? What land to-day is freedom's own? Not Germany.

Go, Teuton boaster! Humbly scan
What gifts thy peers have heaped on thee,
Art's triumphs were achieved by Man—
Not Germany.

In the special annual review number of The Engineering and Mining Journal, issued January 9, under the heading of "Metallurgy of Zinc in 1914," Mr. W. R. Ingalls gives information on two matters of especial interest to operators of lead-zinc mines in British Columbia. In regard to hydrometallurgical process he observes: "The hydrometallurgical work at Bully Hill, California, was checked, but only temporarily, the metallurgists of that company apparently thinking well of the results so far. Some plans regarded as promising are also being carried out by the Consolidated Mining and Smelting Co. at Trail, B.C. Both at Bully Hill and at Trail the idea is to sulphatize the zinc and electrolyze the solution." Included in the notes on Electric Smelting is the following comment: "The experimental work at Nelson, B.C., was discontinued, it being regarded as conclusively settled that an electric zinc-smelting furnace so small as one ton daily capacity is a commercial impossibility, while the satisfactory development of a larger furnace was regarded as too doubtful to be undertaken at Nelson.'