

The World's Great Cities.

Some interesting facts relating to the population statistics of the world's great cities are cited by Prof. W. B. Bailey in the "Independent."

There are at present ten cities in the world with a population of over 1,000,000. Of these, three are in the United States. Russia is the only other country to have more than one city of this size.

London leads with a population of over 7,000,000; but its area is over 440,000 acres. The area of Greater New York is less than half that of London. If New York city could annex enough of its suburbs to make its area equal to that of London, it would at present have a population of over 6,000,000. Even without annexing any more territory,

A New Process for the Felling of Trees.

The attempts from time to time to cut trees with a wire heated by electricity so far have not given satisfactory results.

Now a Berlin inventor, Mr. Hugo Gantke, has recently succeeded in designing an extremely simple device for the mechanical felling of trees. The trunks are cut by the friction of an ordinary steel wire about one millimeter in diameter (No. 18 B&S gauge) which, as shown by practical tests, is able to saw through a tree about 20 inches in diameter, in six minutes.

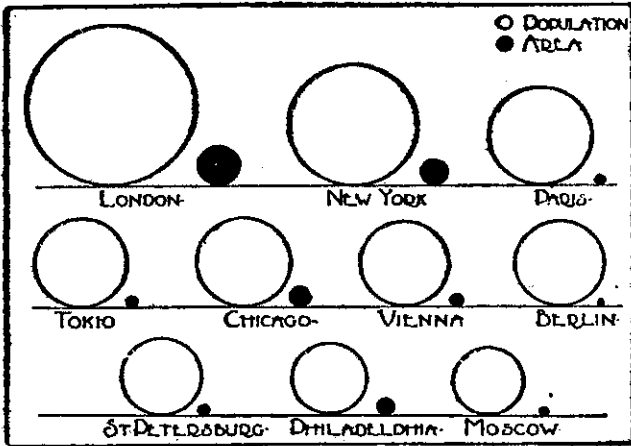
The steel-wire, driven by an electric motor, is heated so intensely by friction on the wood as to burn a thin carbonized kerf, which is both smoother and cleaner than the cut of a saw. The charcoal layer adhering to the trunk is

Airships in War.

Mr. Howard Wright, the well-known constructor of airships does not attach much importance to the alleged plans of the German War Office to construct giant airships capable of carrying three hundred persons at a rate of fifty miles an hour. In an interview in the "Standard," he points out that such a vessel would cost £200,000, would consume over half a ton of petrol every hour, would need a thousand men to handle it in getting it off the ground and easing its landing—and probably another thousand to pick up the wreckage after it had landed. The bigger the airship, obviously the greater its liability to destruction by wind, and although the construction of such vessels is practicable, so, also, unfortunately, is their destruction. Mr. Wright, in fact, says that the three hundred passengers would only be able to ensure a sense of safety by having themselves filled with hydrogen, and he takes leave to doubt whether any self-respecting German prison would care particularly for that. In short, he thinks England is doing wisely in aiming at the creation of smaller ships with very high horse-power.

State Jacobites.

"The King—over the water!" was a toast openly given and enthusiastically received at a Scottish banquet in London one night recently, and in honour of King George. That sentiment has never been given, at least in the United Kingdom, in honour of a Sovereign of the House of Hanover, for it is the oldest of all Jacobite toasts; and it was accustomed to be so symbolically used that finger-bowls were abolished at the dinner-table at Windsor Castle, certainly until late Victorian times, because of the health of the monarch with all apparent loyalty, but literally "over the water." Yet, when Principal J. Yule Mackay, of the University College, Dundee, presiding at the annual dinner of the Glasgow University Club in London, slyly observed that the opportunity was at last given to all Scotsmen to drink with true loyalty the toast of "The King" in the precise form so many of their countrymen for two centuries had desired, there was a roar of acclaim and a rapturous welcome for his ready wit.



DIAGRAMMATIC REPRESENTATION OF THE POPULATION AND AREA OF THE WORLD'S GREATEST CITIES.

New York may, within twenty years, become the greatest city in the world. If it were possible to include suburbs, as has been done by London, it might become the leader within ten years. The area of Registration London, not including the outer ring, is 74,839 acres. On this territory is found a population of nearly 5,000,000, but within the past decade the population of the old city of London has actually decreased. Business is crowding residences from the centre.

Berlin has recently annexed suburbs with a population of nearly 1,000,000. It seems likely that when figures are available it will be discovered that Berlin has displaced Paris as the third city in the world. The following are the population and area of the ten largest cities in the world at the latest date for which figures are available:

City.	Area in Acres.	Population.
London	441,600	7,252,983
New York	209,218	4,768,883
Paris	19,290	2,763,383
Tokio	27,989	2,186,079
Chicago	117,447	2,153,283
Vienna	39,696	2,065,898
Berlin	15,698	2,076,895
St. Petersburg	22,981	1,678,000
Philadelphia	81,828	1,549,098
Moscow	17,654	1,350,254

Japan Moves.

But a few years ago Japan manufactured neither iron nor cotton. Lately she has launched some Dreadnaughts of more than 20,000 tons, built entirely by her own workmen. Not so long ago she manufactured no cotton at all. At present the consumption of raw cotton is, in round figures, as follows:—In Great Britain, 6,000,000 bales per year; in Japan, 1,000,000 bales per year. The 1,000,000 bales of cotton consumed by Japan are converted into yarns, cloth, etc., which are sold partly in Japan and partly in Asia, especially in China, Korea, Manchuria, and, lately, also in India. As it is impossible for British workers to compete on terms of equality with Japanese cotton workers, the loss of the Chinese market to the Japanese cotton industry is merely a question of time.

extremely thin and allows the structure and any disease of the wood to be distinctly recognised. It enables the tree to be marked with chalk, and at the same time serves to preserve any trunks that may be left temporarily in the woods.

Unlike other saws, this felling machine will work freely even on the thickest trees, without requiring any wedges to be inserted into the cut; for instead of any shavings we have only smoke and steam and hence there is no danger of the cut's becoming obstructed. The trees may be cut close to the ground, or even below the ground as far down as the beginning of the roots will permit. In the latter case the stump may be safely left in the soil. The electric motor that drives the steel wire is placed where it is not in danger of being struck when the tree falls.

While mechanical operation is in itself much more rapid than hand-labour a further acceleration is derived from the absence of any intervals of rest between two cuts. As a new piece of steel wire costing but a few cents is taken for each cut, there is no loss of time due to the sharpening of saws, etc. Only one man is required to operate the machine as against two men working with hand saws, and the larger the tree the higher is the relative cutting speed.

When electricity is not immediately available, it can be generated by any existing steam or water plant. It may frequently be found advantageous to use a portable power-plant consisting of a 10-horse-power gasoline motor and dynamo which may be installed temporarily in a central location. A flexible cable may connect the dynamo with the felling machine which can be readily transported and operated by one man.

An important advantage of the new method arises from the absence of any waste, the cut only two millimeters (0.077 inch) in thickness being perfectly smooth and level, whereas axes and saws are bound to injure the trees to a considerable extent.

Extract from a young lady's letter from Venice: "Last night I lay in a gondola in the Grand Canal, drinking it all in, and life never seemed so full before."

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