Why We Need a Separate Trade-Mark Bureau

Growth in Use and Popularity That Demand a Greater Degree of Specialized Federal Oversight

By Chauncey P. Carter

IT is a fact little appreciated by those most interested that patents are granted by virtue of a specific constitutional provision authorizing Congress to secure "for limited times to authors and inventors the exclusive right to their respective writings and discoveries," while the right to exclusive use of a particular trade-mark is acquired by use, is unlimited in duration and is of interest to and may be registered by the Federal Government only if such use extends into interstate or foreign commerce and thus brings the mark into the purview of another constitutional provision giving Congress general authority over interstate and foreign commerce.

Patent rights and copyrights, therefore, are obtained by virtue of contracts between the inventors or authors and the Government wherein the former agree to disclose and do disclose their discoveries or writings in return for the grant of and protection in the exclusive right therein for a limited period after which they shall become public property.

The exclusive right to use a certain trade-mark to identify a certain kind of goods, on the other hand, is not granted by the Government in this country, but is acquired as a result of original use of such mark in connection with those goods just as a newsboy as a result of having been the first to do so, acquires an unwritten right to sell his papers on a certain corner, undisturbed by others. This is true not only in the United States, but also in England and in practically all countries where there is a "common law" consisting of court decisions as distinguished from those countries that are governed entirely by an approved code of laws and known as "code" countries. In most of the "code" countries, the right to the exclusive use of a particular trade-mark in connection with certain goods is not acquired by original use but must be obtained from the Government, which usually grants the same to the first applicant therefor, regardless of earlier use by another without such grant. In fact,

it is a punishable offense in some "code" countries to use a trade-mark that has not been legally granted to the user.

Aside from these "code" countries, however, it will be seen that there is a fundamental difference between patent- and copy-rights on the one hand and trade-mark rights on the other hand, and even in the "code" countries this distinction is made: patent- and copy-rights are limited in duration, while trade-mark rights are unlimited in duration although they are often subject to annual taxes or renewals for revenue purposes and to avoid "sleeping on one's rights."

Notwithstanding this fundamental difference, it seemed wise to certain of our early legislators to place the registration of claims for rights to exclusive use of trade-marks in interstate and foreign commerce in the same hands as had been placed the grant of patents. It is not at all improbable that this was a result of a misapprehension in the minds of these early legislators that the rights were fundamentally similar. Indeed, the first law providing for the Federal registration of trade-marks was soon after its enactment declared unconstitutional, because it was not limited to marks used in interstate or foreign commerce and, therefore, had no place to hang its hat in the Constitution.

However that may be, the Federal registration of trade-marks has always been and is still with the Patent Office. The proposed breaking up of the Department of the Interior and the substitution for it of a Department of Public Works bids fair to become an accomplished fact in the not too distant future. be accompanied by a giving up of the Patent Office to the Department of Commerce as a sort of "swap" for the Bureau of Standards. It therefore seems proper to inquire whether this "swap" might not well be accompanied by a breaking up of the Patent Office into two parts, one to grant patents and the other to register claims to rights in trade-marks, labels and

prints. Such an inquiry would seem to be justified in any case by the great increase in the number of trade-mark registrations that has taken place since this task was entrusted to the Patent Office and by a comparison between the numbers of patents and trade-mark certificates issued then and now.

In the Report of the Commissioner of Patents to Congress for the year ended December 31, 1918, it is stated that trade-mark certificates were first issued in 1870 when there were 121 of them as compared with 13,333 letters patent during the same year. As compared with this, the Report of the Commissioner of Patents to the Secretary of the Interior for the fiscal year ended June 30, 1919, indicates that in that fiscal year 3,766 trade-mark certificates were issued as against 37,259 Letters Patent. In other words, there has been an increase of over 3,000 per cent in the registration of trade-marks as compared with an increase of less than 200 per cent in letters patent. Moreover, while of the patents and trade-mark certificates issued in 1870, trade-mark certificates formed less than one per cent, in 1919 they formed approximately ten per cent. In the fiscal year 1915, the year in which the majority of applications filed prior to the outbreak of the war were finally acted upon, the trade-mark certificates issued compared even more favorably with patents than in 1919.

Despite these facts, and despite the great difference between the merchandizing field, in which advertising and selling depend so heavily upon trade-marks, and the engineering and industrial field, in which patent rights are of such great importance, it is a fact still that one man, the under-salaried Commissioner of Patents, has the last word this side of the courts in both patent and trade-mark matters. Hence, it is not at all unusual, but is rather to be expected, that the Commissioner in a single morning shall be called upon to decide whether there is any invention in a device for

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Correspondence

The editors are not responsible for statements made in the correspondence column. Anonymous communications cannot be considered, but the names of correspondents will be withheld when so desired.

Ventilation of the Hudson River Tunnel

To the Editor of the SCIENTIFIC AMERICAN:

Readily admitting the necessity of vehicle tunnels under the Hudson River at Canal Street, there is the great importance of proper and ample ventilation without which the tunnels would be useless. The greater number of vehicles, probably 90 per cent, will be automobiles and motor trucks, exhaling poisonous gases. On this point the *Literary Digest* for August contains a very instructive article. It concludes with the warning that the contents of carbon monoxide (the most poisonous gas contained in the exhalations of motor vehicles) must not exceed the maximum of four parts in ten thousand parts of air. This conclusion has the endorsement of the United States Bureau of Mines, but the solution of the problem is left to the engineers of the Commission.

Although a novel problem, the principle of it is simple and easily understood. Fresh air enters through holes short distances apart from a fresh air duct, running the entire length of the tunnel. The amount of fresh air must be sufficient to dilute the poisonous gases at the required rate. Another duct, also running the entire length of the tunnel and also connecting with the tunnel through numerous holes, sucks up the contaminated air which is expelled through shafts at each end by mechanical blowers. The ventilation is thus crosswise to the tunnel and is a continuous operation that requires careful designing for its success.

Let us believe that the engineers of the Commission have thoroughly studied the problem, yet it is of such overwhelming importance that the details of that study should be published as proof thereof.

To mention only one point. The velocity of air and gases through the ducts will be very great. The friction along the walls of the duct and through the

orifices will consume a great deal of power, which will increase rapidly as the walls of the ducts will become rough and incrustated from the dirt and dust in the air. The surfaces of the ducts will therefore require periodic inspection and cleaning similarly as chimneys require periodic cleaning from soot. To that end the height of the ducts should be sufficient for a man to walk through from end to end, 4,000 feet long. But the heights shown in the plans are only from one foot to four and one-half feet in the lower duct and from one foot to five feet in the upper duct. These heights are too low and would require continuous stooping of the workmen, which is both exhausting and tormenting in long, hot ducts. The upper grating seems hardly strong enough to bear the weight of any mechanical device or track for removing the dust.

Why is the fresh air duct placed at the bottom? Air coming up from the bottom will mix before being inhaled with the hot poisonous gases, which are expelled at the bottom of motor vehicles. If the cool, pure air is admitted at the top then it can be inhaled before it mixes with the foul hot gases at the bottom, which should be instantly sucked up.

For the ducts to be sufficiently large, the diameter of tunnel should be increased from 29 feet to 32 feet. That would also give more width for the roadway and sidewalk and contribute to greater safety of workmen and policemen employed in the tunnel.

No shortsighted economy should expose the users of the tunnel to poisoning by insufficient ventilation. On this point the details of operation cannot be too specific and should be published. The Commission by meeting this justified request at this time would invite public confidence just when it is most needed for the referendum vote, authorizing the bonds to be issued for this work, which not unjustly is regarded as a huge and costly experiment.

MECHANICAL ENGINEER.

Wicker Weaving by Machine

To the Editor of the SCIENTIFIC AMERICAN:

Your issue of March 6th containing an article under the above title has been brought to the writer's attention. You have supplemented this article with editorial comments to the effect that the art of wicker

weaving has been revolutionized. Evidently you are not aware of the fact that in spite of the invention you describe, wicker baby carriages are still woven exclusively by hand. In other words, the machine which you describe does not weave wicker but weaves an imitation of reed. Reed comes in strands about twenty feet long. The machine you describe feeds from a spool, and the writer has never yet seen a piece of material woven by this machine that was not made of fiber (twisted paper).

So the old art of weaving reed is hardly influenced by this machine. In order to be satisfied with a machine-woven carriage, the mother must be satisfied with a paper imitation of reed, and also must be satisfied with a monotonous sameness of design, as all of those scrolls, festoons and various designs which have been originated by reed workers to delight the eyes of the mother are impossible in the machine-woven carriage.

I have supplied these details for your information. At the same time I have had enough experience as an advertising man to realize that some press agent is entitled to congratulations on his success.

Elkhart, Ind.

A. H. LOEB.

The Dendrograph

To the Editor of the SCIENTIFIC AMERICAN:

Referring to my description of the dendrograph in operation at the New York Botanical Garden published in the SCIENTIFIC AMERICAN for May 29, 1920, I will say that the article was written without due authorization.

Dr. D. T. MacDougal of the Carnegie Institution of Washington, the designer, placed this working model in the hands of Dr. A. B. Stout of the New York Botanical Garden for testing, with the privilege of describing the seasonal growth of the tree to which it was attached in the Journal of the Garden.

The Department of Botanical Research of the Carnegie Institution of Washington proposes to defer publication of a technical description of the instrument until it has been perfected by the aid of results secured from trials now being conducted by collaborators in various parts of the country.

New York.

W. A. MURRELL.

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SCIENTIFIC AMERICAN

contains Patent Office Notes. Decisions of interest to inventors—and particulars of recently patented inventions.

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The use of lime and limestone in the pulp and paper industry is also being carefully scrutinized by the Government scientists in order to develop specifications for lime for the different industries, standard samples and laboratory and plant methods of analysis. Similar tests are under way relating to the restricted use of chlorine for the bleaching of wood pulp. The chlorine in the various kinds of pulp has been materially reduced as a consequence of these experiments without any decidedly deleterious effects on the color of the resultant paper.

What About Our Wheat Production?

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Weld County then began to plant alfalfa as a rotative crop for the celebrated Greeley potato, as they found that the potato yield increased wonderfully when alternated with alfalfa.

Who can deny that the whole problem of refertilization of worn-out grain fields was settled by these farmers of northern Colorado? They not only demonstrated the science of green manuring but they happened to light upon the ideal plant for that important function.

Now I find in handling broadly the question of green-manuring the college professors, and the farm papers, prone to expend their efforts upon diffusive experimentation and discursive discussion. They treat green-manuring as a special process, all by itself, rather than as a part of regular farm routine. They talk about the vetches, cow peas, horse beans, soy beans, etc. If we stop to think a moment none of these is a standard farm crop and if used as an article of green manuring each must be treated specifically, whereas alfalfa is a valuable standard farm crop, and by its use may be utilized as a green manure crop without any break in farm production; that is, no time will be lost in producing a green manure crop, because it is already produced, and may be plowed under any fall and the land seeded to some other crop the next spring.

Another instance of refertilization by means of crop rotation I have recently observed in California: It is the case of sugar beet culture. The culture of sugar beets greatly improves the fertility of the land. Investigations made by the California College of Agriculture showed the following increases in the yield of various crops upon land previously cropped to sugar beets:

Wheat, yield before beet culture, 24.5 bushels; after beet culture, 41.3 bushels; per cent increase, 68.6.

Rye, yield before beet culture, 28.4 bushels; after beet culture, 40.8; increase per cent, 43.7.

Oats, yield before beet culture, 61.8 bushels; after beet culture 75.3 bushels; increase per cent, 21.8.

Barley, yield before beet culture, 23.2 bushels; after beet culture, 43.5 bushels; increase per cent, 87.5.

Potatoes, yield before beet culture, 218.6; after beet culture, 238.0 bushels; increase per cent, 8.97.

Rape, yield before beet culture, 23.2 bushels; after beet culture, 48.8; increase per cent, 110.

Here we discover a natural and easy process of producing our sugar, bread, potatoes, etc., in rotation, and at the same time maintaining the maximum fertility of our soils.

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enabling the utilization of kerosene instead of gasoline in an engine and if so who is the rightful inventor thereof, and in doing so to consider all the fine points of chemistry and physics involved; and immediately afterward to decide whether

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