

What to Invent

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OF late, we are receiving a great many inquiries from experimenters, would-be inventors, inventors, as well as others, asking us to publish a “list” of useful electrical devices which as yet require to be invented. Most of our correspondents state that they are of an inventive turn of mind and quite a few admit very frankly that in the past they have lost a good deal of money and time in trying to develop ideas which afterwards turned out to be of no earthly practical use. By boiling down the various inquiries, this is what our correspondents desire: “What electrical inventions are urgently required at present, and which ones are the most desirable from a financial viewpoint?”

As most everyone is familiar with the important problems as yet unsolved, such as: Electricity direct from Coal; Harnessing of the Sun’s and the Ocean’s Energy; Cold Light, etc., we do not for the present wish to dwell upon these.¹ For that reason the “list” which we suggest below will probably be more in keeping with our would-be inventors’ desires. We make no claim that the suggestions are highly original, or that they could not easily be improved upon. We do, however, think that it would be quite profitable to invent and market any one of the ideas and devices cited. At least that is our humble opinion.

Wire Insulation. At present we use either cotton, silk, rubber, or enamel to cover wires. There is needed a covering, having all the good qualities of silk and cotton as well as enamel, but none of their bad ones, i.e., the insulation must take up a minimum of space, it must be tough and must not crack or break.

Storage Battery Casings. 98% of all portable storage batteries are now encased in wood. Wood is cheap and if well impregnated it is fairly acid proof for a

¹Gernsback poses the question of cold light to Edison in their interview. See **Thomas A. Edison Speaks to You.**

limited time. As a whole the material, however, is not satisfactory. There must be something better. What is it?

Heavy Current Microphone. Wireless telephony is retarded at present because there is no practical transmitter that can handle from 5 to 10 amperes continuously. The microphone should be small and should not require water cooling, as this makes it highly undesirable. Preferably no carbon should enter into its construction.

Marble Substitute. There is an immense demand for instrument bases and parts, switch and switchboard bases, etc. At present very expensive marble, slate, wood or composition is used. Porcelain is cheap, but never presents a good appearance, especially for instrument bases. Marble dust is cheap and can be readily had in large quantities. Who will be the first *to mold* a real cheap marble base, that take a good polish? We are aware of the fact that artificial marble is in existence. It is, however, almost as expensive as the natural.²

Telephone Muffler. A device is needed whereby you can talk into your telephone transmitter in such a manner that a person sitting close by cannot hear what you say. Every business office, for obvious reasons, can use such an attachment. At the present time the business man must use a cumbersome, as well as expensive telephone booth. There have been telephone mufflers on the market in the past, but all died a quick death; there was just one trouble with them; they didn't muffle!

Tele-Music. An "industry" rivaling the moving picture business can be created when some genius perfects a means supplying telephone subscribers with all kinds of music from a brass band down to a violin concert. The requisites are that ten or 100,000 subscribers can listen in, all at the same time, without the sound weakening as more telephone lines are put in the circuit. The subscriber must be able to use his regulation instrument. No expensive attachments should be used; only, perhaps, let us say, a low priced horn, quickly attachable to the telephone receiver. The music should be heard loudly all over the room. No expensive nor complicated plant should be used at the point where the music originates. A two-wire line should connect the plant with "central."

These are only a very few suggestions. If required we will publish more from time to time.

²Bakelite, one of the earliest synthetic plastics (patented in 1909), would eventually take on the function Gernsback calls for here. The material became the default for radio cabinet and knob construction by the 1930s, allowing for ever more unique designs in radio sets, especially portable sets. According to Michael Schiffer, the 1932 International Kadette Convertibles Midget was "the first small radio with a Bakelite (plastic) cabinet to be produced in large quantities." Michael B. Schiffer, *The Portable Radio in American Life*, (University of Arizona Press, 1991), 110.

PATENT ADVICE

Edited by H. GERNSBACH

In this Department we will publish such matter as is of interest to inventors and particularly to those who are in doubt as to certain Patent Phases. Questions addressed to "Patent Advice" cannot be answered by mail. Sketches and descriptions must be clear and explicit. Only one side of sheet should be written on.

WIRELESS DEVICES.

(50.) L. H. G. submits several ideas regarding rotary spark gap, quenched spark gap, hot-wire ammeter, and wishes to have our advice. He also wishes to know if, in case the devices are patentable, they could be sold for a reasonable sum without first obtaining a patent.

Our correspondent has an idea to increase the efficiency of a quenched spark gap by inclosing the entire gap in a certain gas, and wants to know if this would increase the efficiency of the gap.

A. A quenched gap will not work as well when inclosed in gas, for the reason that it will not be air-cooled as well as if it were under ordinary atmospheric pressure. For that reason it would work less efficiently.

On his rotary variable condenser a certain number of circular plates are mounted on two horizontal insulated rods. More or less plates can be placed in the circuit.

A. We do not see anything new in this condenser, as a similar one is already on the market, and the difference in the construction is not great enough to warrant your obtaining a patent.

As to the hot-wire ammeter, we believe its construction to be faulty, and we doubt if a patent can be obtained. As to the other question, we would never advise anyone to sell or offer for sale an invention without having first applied for a patent on same. It is a risky thing to do, and the inventor frequently loses the title to his invention.

EMPLOYEES' INVENTIONS.

(51.) C. J. Conner, Coatesville, Pa., wishes advice on the following:

Can an employer, whether a corporation or individual, claim an invention made by one of his employees and patented by said employee, the latter not using the time or material of the employer when developing the invention, and further, the employee paying for the patent.

A. If the invention has not been developed on the premises of the employer he has no right to the patent, if obtained by the employee. Only by working on the employer's premises, using his tools and equipment, etc., can an employer actually claim title to an employee's invention. We would suggest that you write to a patent attorney and obtain detailed information on the matter.

NON-OXIDIZING CONTACT.

(52.) W. Kademaker, Hoboken, N. J., wishes advice on the following questions:

1. Having applied for patents on an absolutely water-dust-rust-fire-etc.-proof nonoxidizing and unexplosive contact or circuit breaker, what would be, according to your opinion, its commercial value or field of application?

A. 1. It is impossible to say what the commercial value of the contact of this kind would be without knowing the composition of it. Just by having a contact fire-proof means nothing, as some contacts are used under a very great heating stress where even platinum, which has a very high melting point, wears away in time. Tung-

sten is being used, as it has a very high melting point, but it is not very suitable on account of its being too brittle.

2. Are exposed circuit-making devices, such as rail, fire-alarm signals, bells outside, frequently inoperative on account of atmospheric influence, ice, sleet, etc.?

A. 2. Yes.

3. Are there any contacts on the market which work by a sliding member in an airtight space?

A. 3. To our knowledge there are quite a few such contacts on the market. We believe the idea is a common one.

NEW DETECTOR.

(53.) Carter Pietsch, Bloomington, Ill., submits a new scheme for a wireless detector which is supposed to operate by using certain metallic members and certain magnetic windings surrounding these members. Our correspondent wants to know if this detector will work, also if it is patentable. He also would like to know who the most reliable patent attorney is to whom he might submit the idea.

A. Without trying out a scheme of this kind it is wholly impossible to say offhand whether it would work or not. Would advise our correspondent to have a sample made up and tested, and if it works we think a patent can be obtained, for the idea is rather novel. As to patent attorneys, any patent attorney advertising in this magazine can be trusted implicitly.

LOOSE COUPLER.

(54.) Oscar Taman, Chicago, Ill., submits drawing and specifications of a new long-wave loose coupler, and means are provided to entirely eliminate the dead end effect on long waves. Several moving tubes with wire are used in order to accomplish this. Inquirer desires to know whether his idea is patentable.

A. A loose coupler similar to the one you show is already on the market, and we do not think a patent could be obtained on your design.

Give the same thoughtful attention to the other fellow's ideas that you would have him give to yours, for in that way you not only learn more, but make more friends while you are about it.

PATENTS

IF YOU HAVE AN INVENTION which you wish to patent you can write fully and freely to Munn & Co. for advice in regard to the best way of obtaining protection. Please send sketches or a model of your invention, and a description of the device, explaining its operation.

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Figure 1: Page from April 1916 issue of *Electrical Experimenter*