

# The Radio Hotel- Patented Antennas

By Rick Hiller -- W5RH

3 types of patents exist within the US Patent Office (USPO) intellectual property system – Utility, Design and Plant. **Plant** is just that – green things that grow. **Design** is the “look and feel” of a product – like the unique shape of a Dodge Charger, for example. **Utility** is where the bulk of the patents are filed. This is where the nuts and bolts of a design, idea or concept are documented. Most antennas fall in this category. At least the ones we are familiar with.

If you would like to investigate patented antennas on your own....*Google* ‘patents’ and the “Google Patent” page will come up. Just put “antenna” into the search engine field and stand back. I just did that and it came up with 91,280 hits. Have fun looking thru all of those. Another search engine is on the **Justia Legal** site <https://patents.justia.com> Just put in a company name like “Steppir” and up pops all of the patents and descriptions for that particular company.

To kick off your search into patented antennas, I have provided a random sampler of a few HF Amateur Radio antennas. You can search for them by putting the patent number into the Google Patent search field. The result offers you the option to view, or even download, the full patent disclosure on how they work. Sweet!

## Patent Nos.

## Description

1,745,342 and 1,860,123 Hidetsugu Yagi – original patents on the Directional Methods

3,474,453 Whip with adjustable tuning

4,630,060 4,222,053 4,593,289 Butternut Electronics HV-2V, HF-6V etc.

6,677,914 and 8,963,560 Steppir / Fluid Motion All the Steppir basic functions

7,586,462 TAK-Tenna Design

7,999,754 Fractal Antenna Systems

9,065,178 Hi-Q Company’s Loading Coil

And here is the best one of all:

4,642,650 Portable HF Antenna -- Thomas M. Morton (better known as our own W5TOM)

I trust this information is enough to keep you busy for quite awhile, if you are really interested in the fundamentals and methods of physical and electrical antenna design. The more you know, the easier it is to understand how these magical devices function and provide us with the capability to communicate around our city and the world. Enjoy your hobby.

Happy New Year. 73...Rick – W5RH

## Next Time – Full Wave Loops – Part 1

*The purpose of **The Radio Hotel** is to give you a practical kick start into exploring the workings of antenna systems. Google the buzz words and find out what they mean. Read up on antenna system theory to see how it all works together. You will be glad you did.*