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A Simple High Frequency Alternator

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High frequency alternating currents are receiving more attention in physics than ever before. Most of the recent high frequency generating devices have employed vacuum tubes. There are lines of research, however, where mechanical generators are desired.

This generator uses the vernier principle which makes the number of cycles generated per revolution equal to the product of the number of poles on the stator by the number of armatures on the rotor. It should be possible to get 40,000 cycles per second with this machine. The number of cycles per revolution in mechanical alternators is usually equal to or less than the number of poles.

The simplicity of the design can be seen in figure 1. No slip rings or brushes were used in the actual construction. The figure is shown to illustrate the vernier principle only.

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