(No Model.)

C. L. WOOLLEY.

ELECTRIC GENERATOR ATTACHMENT FOR DENTAL ENGINES.

No. 563,995. Patented July 14, 1896.

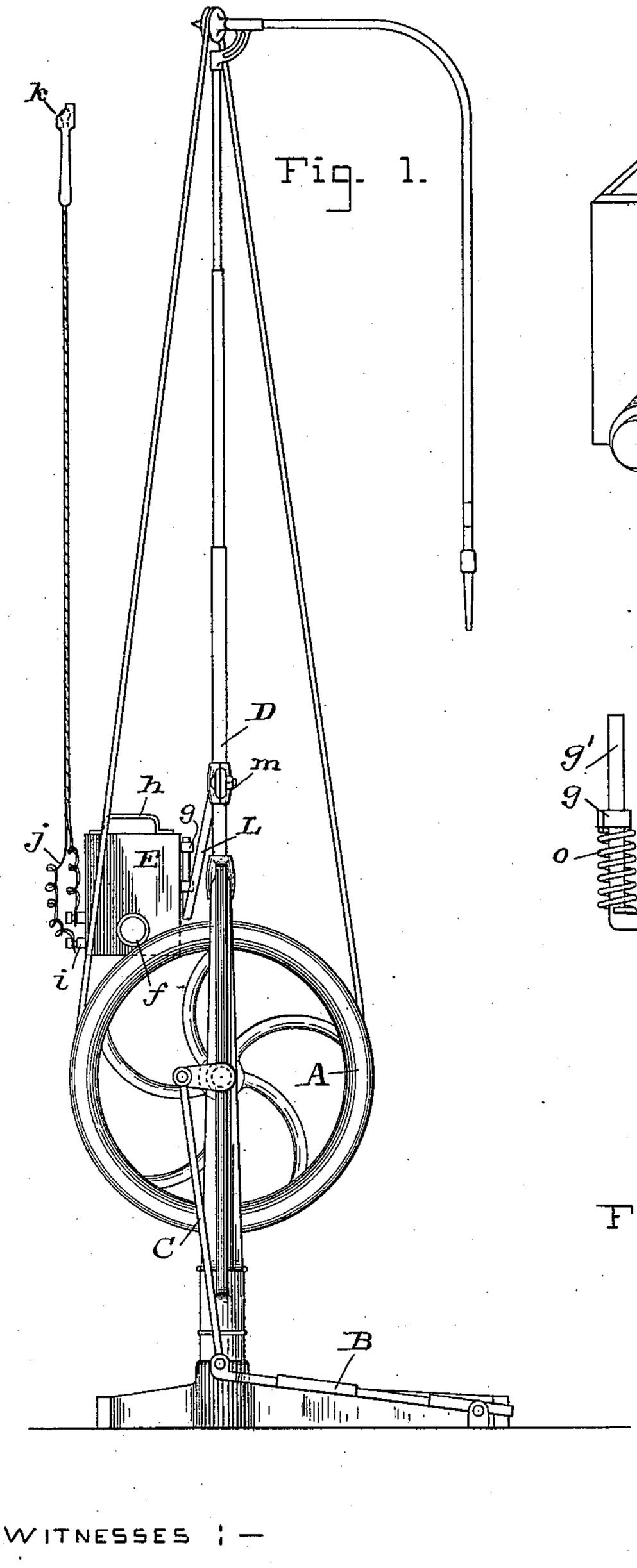


Fig. 1.

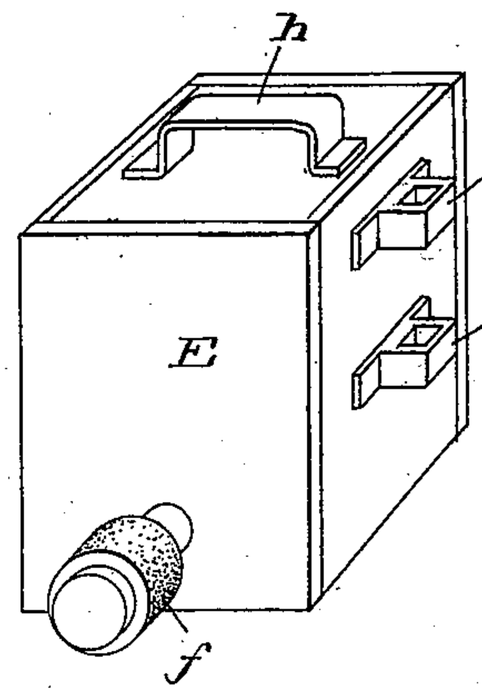


Fig. 2.

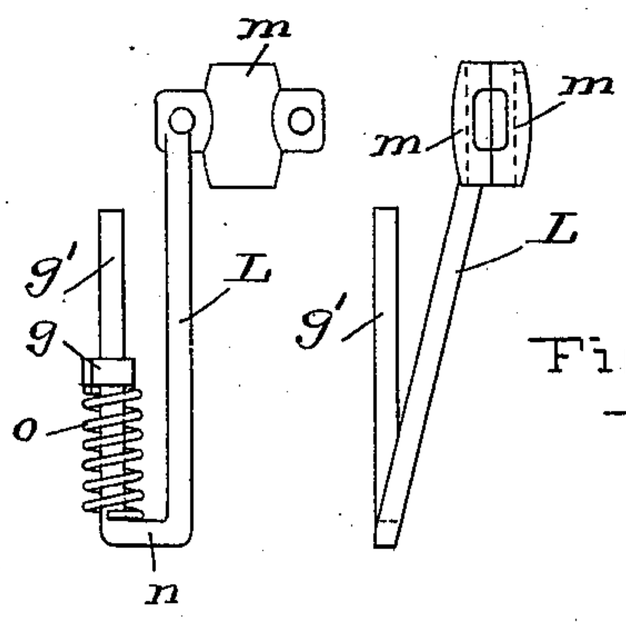
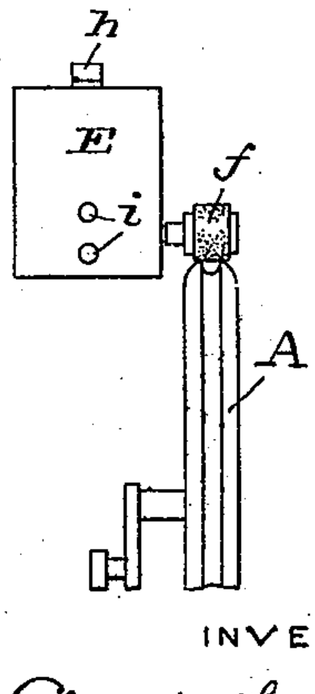


Fig. 3.

Fig. 4.



WITNESSES :—

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ELECTRIC-GENERATOR ATTACHMENT FOR DENTAL ENGINES.

SPECIFICATION forming part of Letters Patent No. 563,995, dated July 14, 1896.

Application filed May 18, 1896. Serial No. 592,087. (No model.)

To all whom it may concern:

Be it known that I, CLAUDE L. WOOLLEY, a citizen of the United States, residing at Baltimore, in the State of Maryland, have invented certain new and useful Improvements in Electric-Generator Attachments for Dental Engines, of which the following is a specification.

This invention relates to an electric-generator attachment for dental engines.

The object is to provide means whereby a generator may be temporarily attached to the standard of a dental engine and motion imparted to the armature of said generator by the drive-pulley of the engine.

By this invention electricity may be generated to produce a small incandescent light for the mouth, to be used in exploring and examining the teeth, and also to furnish motive power or force to operate a plugger or mallet in dental operations.

The invention is illustrated in the accompanying drawings, in which—

Figure 1 is a view of a dental engine with a generator attached and operating an incandescent lamp. Fig. 2 is a perspective view of the generator—in this case a magneto-machine. Fig. 3 shows two views of the hanger by which the generator is attached to the engine. Fig. 4 shows the position of the drive-pulley of the armature resting on the pulley of the dental engine.

The ordinary dental engine has a drive-pulley A, provided with a crank, and is operated by a treadle B and a pitman C, connecting the crank and treadle. This engine also has a standard D, which projects upward above the drive-pulley. Engines of this character are very largely in use. Perhaps every operative dental surgeon employs one in his office. By my invention I combine with the standard and the drive-pulley of this engine an electric generator which is supported by the standard while the revoluble armature of the generator is driven by the pulley.

The letter E designates the case of a generator—in this instance an ordinary magneto-generator of well-known construction, the revoluble shaft of which projects through the wall of the case to the exterior, and the upper projecting end is provided with a friction-pulley *f*. One side of the case has metal loops or eyes *g*, and the top has a handle *h*. Binding-posts *i* are on the case, and wires *j* connect with said posts, and the ends of the wires carry a small incandescent lamp *k*.

A hanger L has a suitable clip which grips onto the standard D of the engine, by which it is held, and a prong *g'* of the hanger takes into the loop or eyes *g* on the generator-case and thereby supports said generator with its friction-pulley *f* in contact with the drive-pulley A. Thus all the parts are in operative position. The revolution of the drive-pulley of the engine imparts movement to the armature of the generator and produces electricity.

The clip of the hanger is made, in the present instance, in two halves *m*, and screws bind said halves together and thus firmly grip the standard D. The hanger is attached integrally to one of the halves.

The hanger is preferably made as follows: The arm, which is attached to the clip *m*, extends downward and at its lower part has an offset *n*, and this offset has an upward-projecting prong *g'*, which, as already stated, takes into the loops or eyes *g* of the generator-case. By this construction the generator E may be readily lifted to remove it from the hanger-prong and thus detach it entirely from the engine. The hanger L should remain always clipped to the standard D, in readiness to receive the generator whenever its use may be required.

It will be understood that the weight of the generator is not intended to be borne by the hanger-prong *g'*, but rather the said weight is supported wholly or partly on the rim of the drive-pulley. This result is brought about by the friction-pulley *f* resting on top of said drive-pulley. The pressure of the friction-pulley upon the drive-pulley, produced by this arrangement, insures that the armature will revolve. To prevent too much pressure and to relieve the mechanism of the generator from the jar and shock incident to irregularity in the rim of the drive-pulley A, a spiral spring *o* is provided and placed around the prong *g'* of the hanger, so that the lower eye *g* of the case may bear down on said spring. The spring will yield under the weight of the generator and its case E, and thus some part of the weight will not bear on top of the drive-pulley A.

To start the generator, it is only necessary

to place it in position on the hanger. To stop it, it is only necessary to lift it off the hanger.

Having thus described my invention, what I claim as new, and desire to be secured by Letters Patent, is—

1. The combination of the drive-pulley of a dental engine; the standard of said engine; an electric generator supported by said standard and having a revoluble armature which is driven by contact with said drive-pulley.

2. The combination of the drive-pulley of a dental engine; the standard of said engine; a hanger having a clip which grips said standard; an electric generator the case of which is attached to said hanger; and a friction-pulley on the armature-shaft of said generator which engages the drive-pulley of the engine.

3. The combination of the drive-pulley of a dental engine; the standard of said engine; a hanger having a clip which grips the said standard and provided with a prong; an electric generator the case of which has loops or eyes to engage the prong of said hanger; and means connecting the revoluble armature of said generator with the drive-pulley of the engine.

4. The combination of the drive-pulley of a dental engine; the standard of said engine; a hanger having a clip which grips the said standard and provided with a prong; an electric generator the case of which has loops or eyes to engage the prong of said hanger; a spring on said hanger to support part of the weight of the generator; and a friction-pulley on the armature-shaft of said generator and engaging the drive-pulley of the engine.

In testimony whereof I affix my signature in the presence of two witnesses.

CLAUDE L. WOOLLEY.

Witnesses:
LEE I. VAN HORN,
CHARLES B. MANN, Jr.