(No Model.)

S. A. GOULD.

FOOT POWER MACHINE.

No. 564,572. Patented July 21, 1896.

Fig. 1.

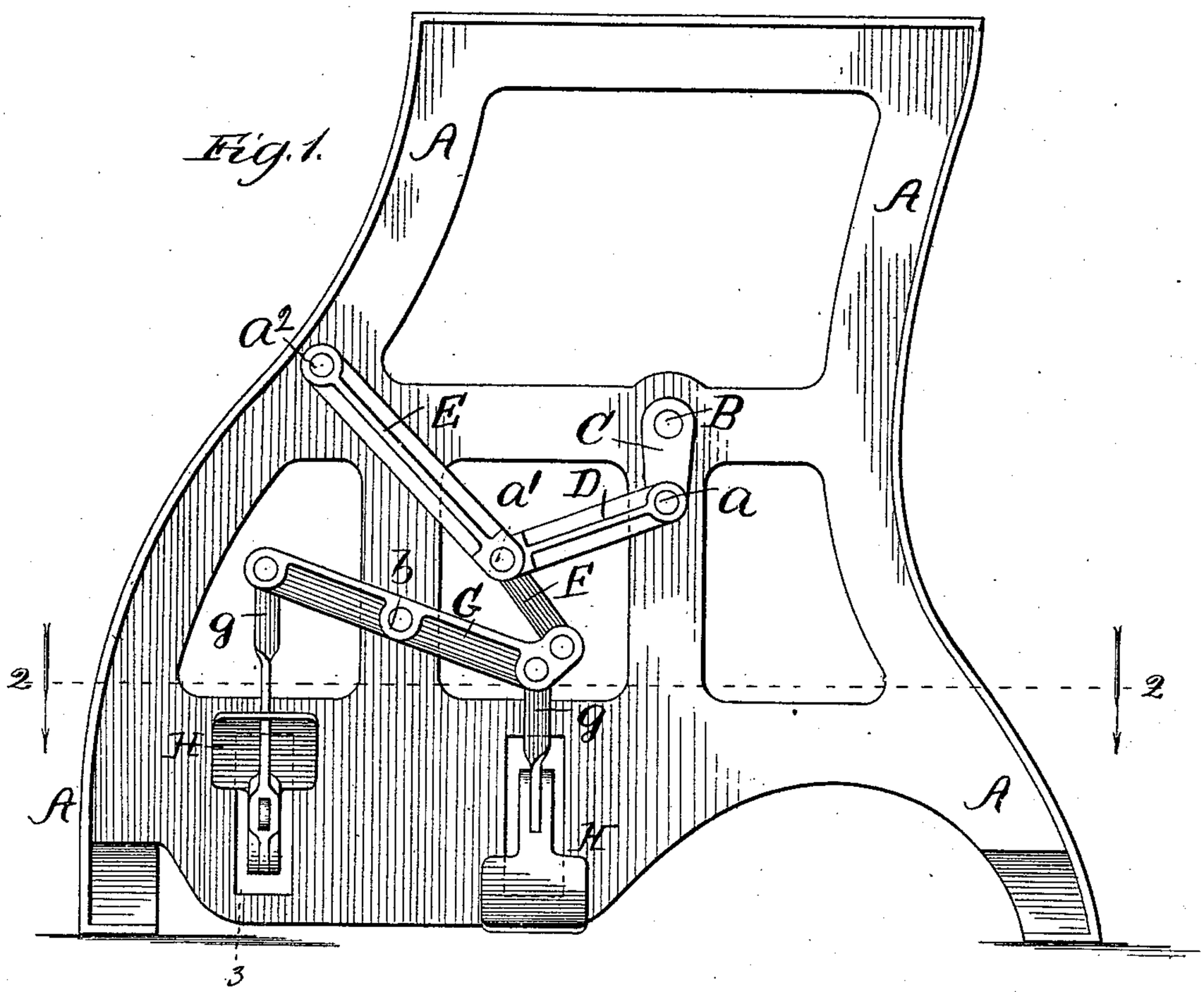


Fig. 2.

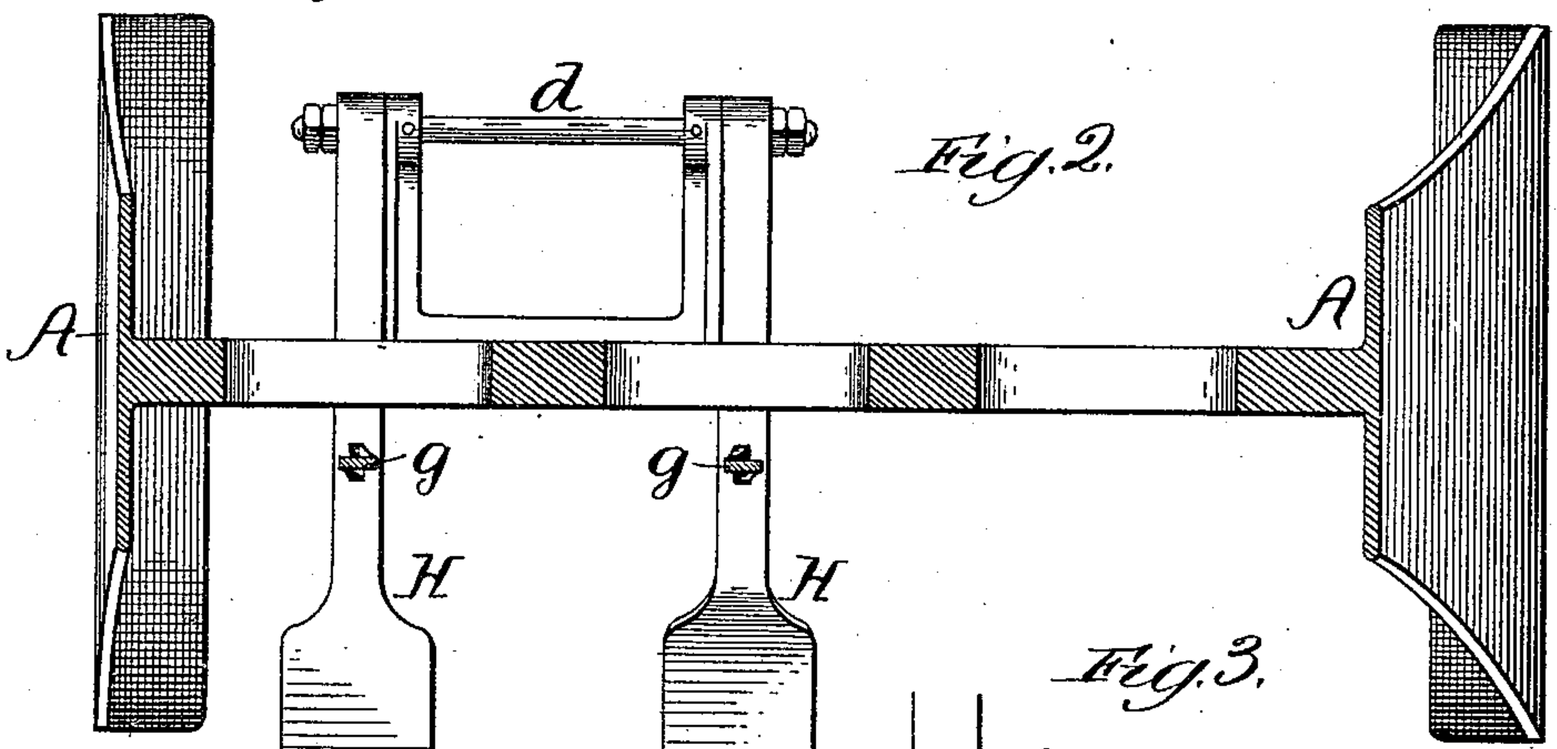
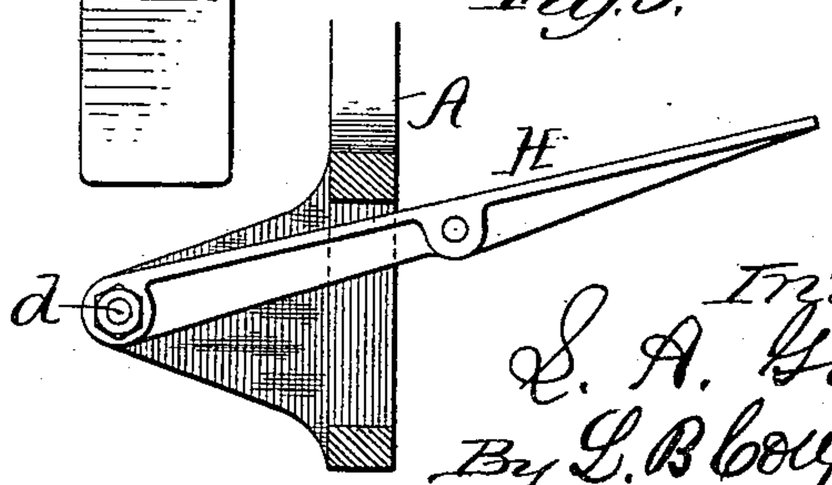


Fig. 3.



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UNITED STATES PATENT OFFICE.

SAMUEL A. GOULD, OF CHICAGO, ILLINOIS, ASSIGNOR TO ROBERT S. FLEMING AND JAMES B. DOBYNE, OF SAME PLACE.

FOOT-POWER MACHINE.

SPECIFICATION forming part of Letters Patent No. 564,572, dated July 21, 1896.

Application filed December 30, 1895. Serial No. 573,786. (No model.)

To all whom it may concern:

Be it known that I, SAMUEL A. GOULD, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Foot-Power Machines; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention consists in the employment of a peculiar arrangement in the form of a system of compound levers between the treadles and the shaft, transmitting the motion and power to the machine to be operated.

Figure 1 is a front elevation; Fig. 2, a horizontal section on line 2, Fig. 1; and Fig. 3, a broken-away vertical section on line 3, Fig. 1.

A represents the different parts of the supporting frame or pedestal, which may be of any desired shape other than that shown.

The crank or driving-shaft B is provided with suitable journal-bearings in the supporting-frame, the crank-arm C being mounted on one end thereof, as shown. To this crank-arm is connected one end of the short arm D, by the pin *a*, the opposite end being pivoted to the inner end of the longer arm E by the pivot-pin *a'*. The other end of the arm E is pivotally secured to the frame at one side by the pivot-pin a^2 and at a point somewhat higher than the crank-shaft, as shown in Fig. 1.

One end of the arm or short link F is joined to the connecting ends of the arms D and E by the same pivot-pin *a'*. The other end of the arm F is connected to the inner end of the rocking lever G, which in turn is pivotally secured at its longitudinal center to the frame by the pivot-pin *b*.

The foot-treadles H H are mounted on the rod *d* and connected to the respective ends of the rocking lever G by the links *g g*. The treadles are set alternating. This arrangement forms a triangular connection between the crank-shaft and the rocking lever G and operates somewhat on the principle of a compound toggle system, increasing the leverage and to a certain extent lessening the loss of power in passing the centers or "dead points." The machine may also be started when the crank is nearer to the centers than if the connection were direct.

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

In a foot-power machine, the combination of the driving-shaft and crank mounted thereon, the arm D, the arm E, the arm F, the rocking lever G, the treadles, and the links connecting the opposite ends of the rocking lever and treadles, substantially as described.

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

SAMUEL A. GOULD.

Witnesses:

L. M. FREEMAN,

L. B. COUPLAND.