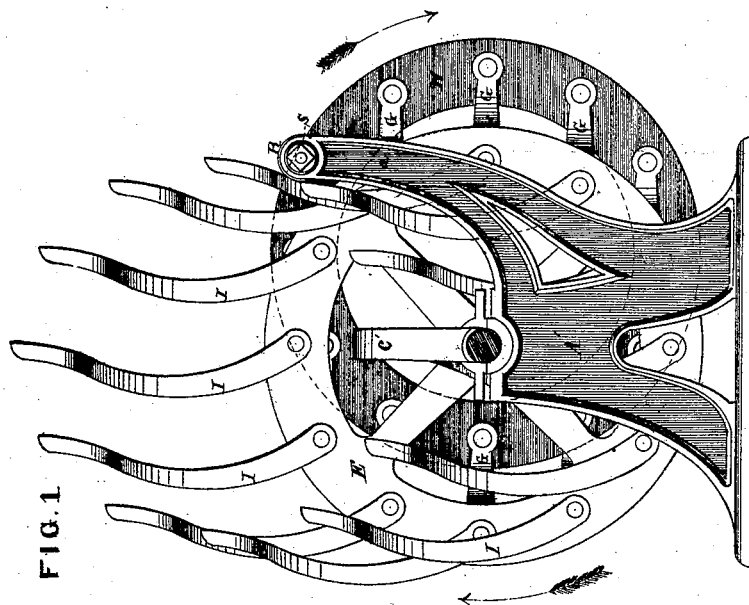
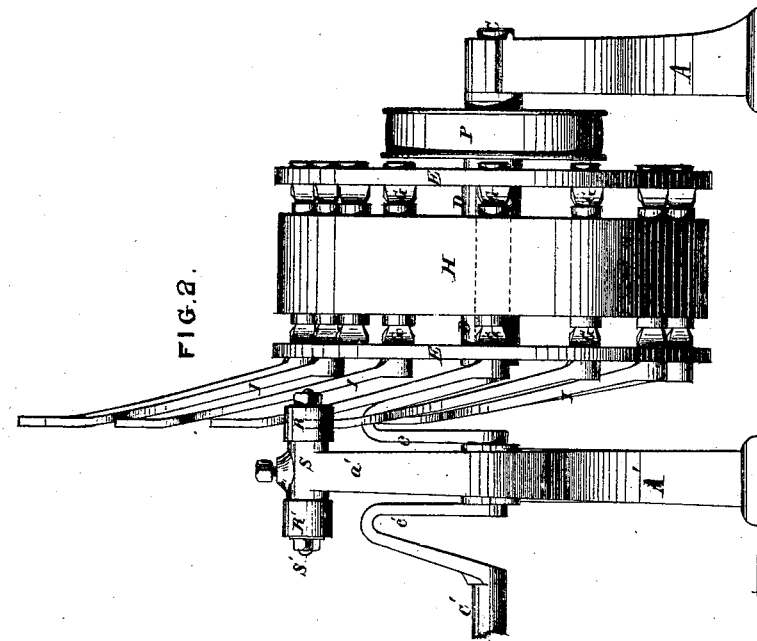


J. Wolf,
Mechanical Movement.
No. 111,503. *Patented Jan. 31, 1871.*



WITNESSES.
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JACOB WOOLF, OF BURR OAK, MICHIGAN.

Letters Patent No. 111,503, dated January 31, 1871.

IMPROVEMENT IN MECHANICAL MOVEMENTS.

The Schedule referred to in these Letters Patent and making part of the same.

I, JACOB WOOLF, of Burr Oak, in the county of St. Joseph and State of Michigan, have invented a new and useful Improvement in Mechanical Movements, of which the following is a specification.

Nature and Objects of the Invention.

This apparatus acts on the same principle as that described in my patent of November 29, 1870.

My present improvements relate to—

First, a device for maintaining the proper position of the levers, through whose agency the power is communicated;

Second, an improved construction of driving-shaft for use with my mechanical movements.

Description of the Accompanying Drawing.

Figure 1 is an end elevation of my improved apparatus.

Figure 2 is a side elevation of the same.

General Description.

A A' are a pair of standards, mounted on a bed, B, and supporting a stationary shaft, C, which is formed with a bend, as shown at c, to permit the passage of the levers I.

C' represents a partial continuation of the same shaft; and

c', a second bend, or crank, to be used with a duplex machine, as represented in my patent of December 13, 1870.

The sleeve-shaft D, wheels E, (one or more,) cranks G, eccentric annular weight H, (one or more,) and lever I may be constructed and arranged as described in my patent of November 29, 1870.

In respect to the levers, however, it is preferable to make them of the curved form, shown in fig. 1, and inclined, as represented in fig. 2, to adapt them to work with ease and uniformity upon their bearing, which consists of a roller R, mounted on a stud-shaft, S, on an upward extension a' of the standard A'.

R' S' represents a similar bearing for a second or companion-machine, if one be used, as described in my patent of December 13, 1870.

P represents the driving-pulley attached to the sleeve-shaft D.

Claims.

What I claim as my invention is—

1. The bearing R S a', in combination with the levers I, wheel E, cranks G, and eccentric annular weight H, one or more, adapted to operate as described.

2. The stationary crank-shaft C, bent, as shown at c, in combination with the standards A A', levers I, cranks G, wheel E, and weight H, as described.

JACOB WOOLF.

Witnesses:

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