

No. 761,452.

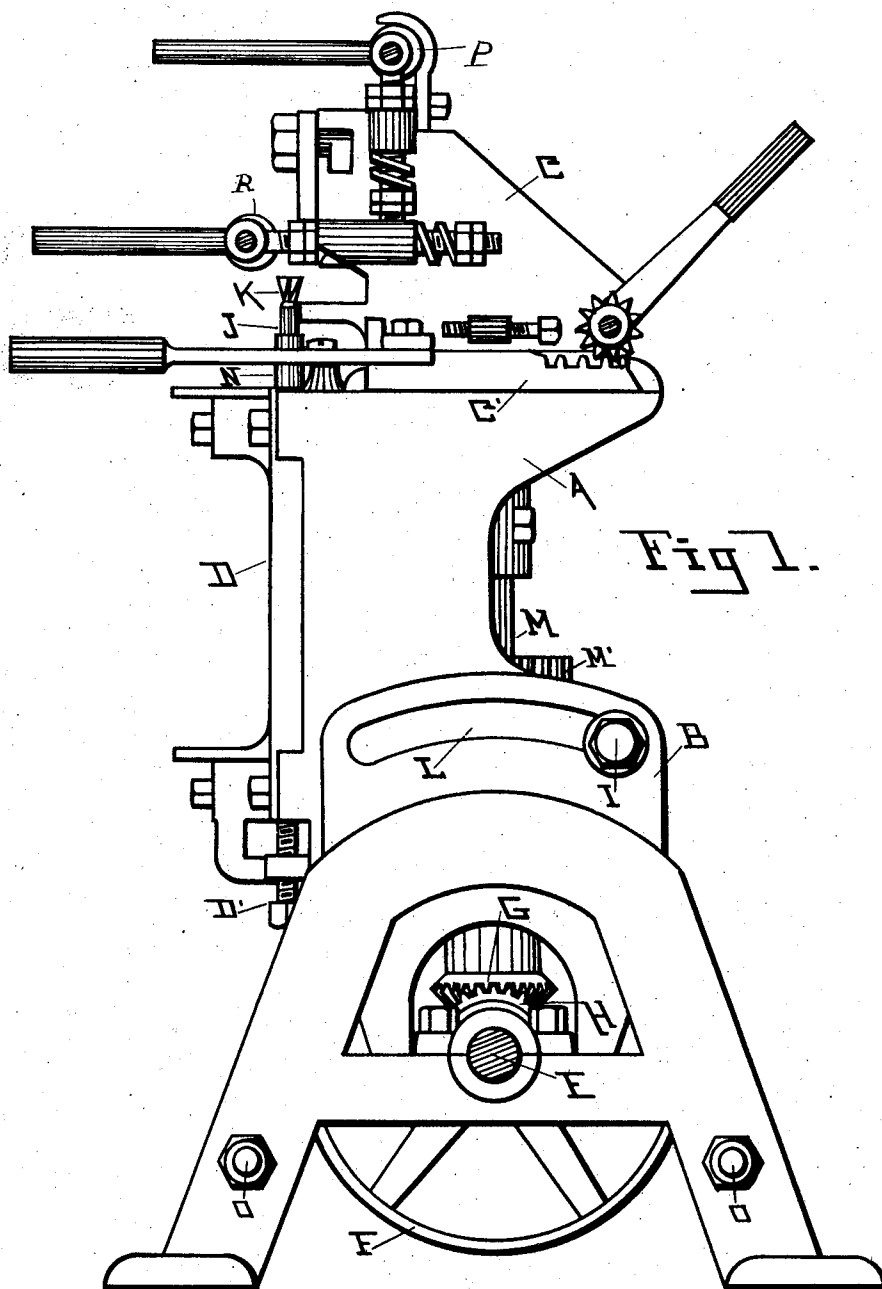
PATENTED MAY 31, 1904.

C. W. DAKE.
DOVETAILING MACHINE.

APPLICATION FILED JULY 3, 1903.

NO MODEL.

3 SHEETS—SHEET 1.



WITNESSES:
Mary S. Tooker
Charles M. Wilson

Charles W. Dake INVENTOR.
BY Edward Taggart
His ATTORNEY.

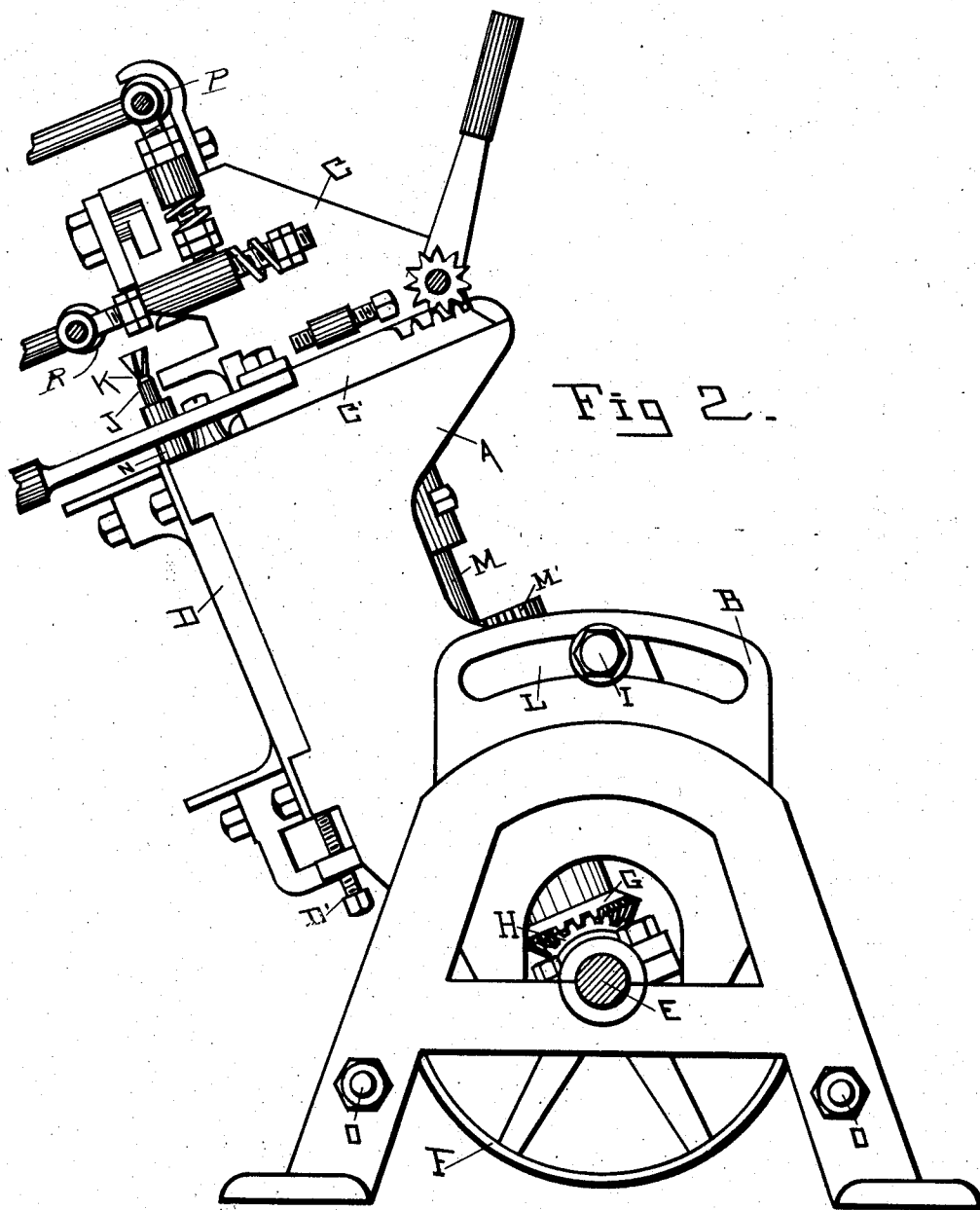
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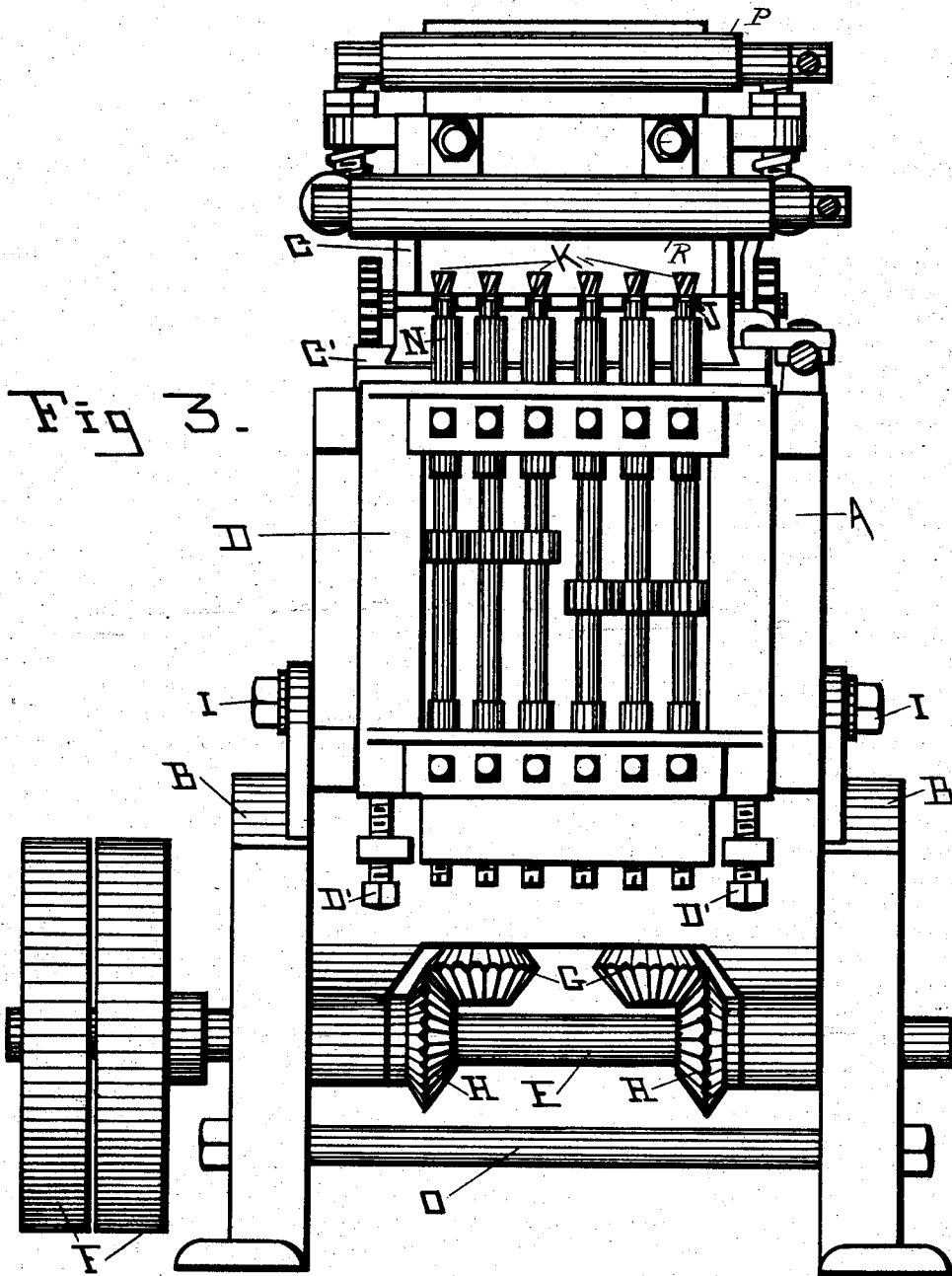
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Mary S. Tooker
Charles M. Hibon

Charles W. Dake. INVENTOR.

BY Edmund Luggart
His ATTORNEY.

UNITED STATES PATENT OFFICE.

CHARLES W. DAKE, OF GRAND RAPIDS, MICHIGAN, ASSIGNOR TO THE
ADVANCE MACHINERY COMPANY, OF TOLEDO, OHIO.

DOVETAILING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 761,452, dated May 31, 1904.

Application filed July 3, 1903. Serial No. 164,227. (No model.)

To all whom it may concern:

Be it known that I, CHARLES W. DAKE, a citizen of the United States, residing at Grand Rapids, in the county of Kent and State of Michigan, have invented new and useful Improvements in Dovetailing-Machines, of which the following is a specification.

This invention relates to certain new and useful improvements in dovetailing-machines; and the invention consists in combining with a horizontal shaft a shaft substantially at right angles thereto and adapted to convey the motion to the operating parts of the dovetailing-machine through said last-named shaft; also, in means in combination with the operative parts of the dovetailing-machine whereby the same may be tilted or adjusted to any required position.

The objects of my invention are, first, to increase the efficiency of the machine; second, to furnish adjustability to the parts of the machine carrying the dovetailing mechanism; third, to construct a machine that will occupy a minimum amount of floor-space in a factory; fourth, to operate the machine from a horizontal shaft carried by a stationary frame and to convey the motion to the dovetail-cutting machinery by means of the second shaft or shafts. These objects I accomplish by means of the mechanism illustrated in the accompanying drawings, in which—

Figure 1 shows a side elevation of my invention in an upright position. Fig. 2 shows also a side elevation with the frame carrying the dovetailing mechanism tilted forward, preferably tilted to an angle of about forty-five degrees. Fig. 3 shows a front elevation of the machine.

In the drawings, A shows the frame which supports the dovetailing mechanism and which is preferably connected to the base-frame B, as hereinafter described. The base-frame B B is rigidly secured in position by any suitable means.

C and C' show the head or carriage which is adapted to support the stock to be operated upon by the dovetailing-cutters.

D shows the spindle-supporting frame, constructed in any suitable manner.

D' is an adjusting-screw for adjusting the frame D.

The frame A is provided with cutting-tools of any suitable kind for making the dovetail grooves.

E is a horizontal shaft suitably journaled in the lower or base frame and is provided with driving band-pulleys F, which pulleys are connected with any suitable power. The shaft E carries the beveled gear-wheels H H, as is clearly shown in Fig. 3.

M represents shafts substantially at right angles to the shaft E, and each shaft M is provided with a gear-wheel G at its lower end and with gear-wheels M' at its upper end for driving the spindles N of the cutter K. The lower frame D is held together by bolts O or other suitable means.

The dovetail mechanism may be of any well-known kind and does not in itself contain any part of my invention. This dovetail mechanism is supported by the frames A and D, as above described.

The shaft E forms a center or pivotal point for adjusting the frame A and connects the frame A to the base-support. The connection of the shaft E by means of the beveled gears H H to the gears M allows for the tilting of the frame A without disconnecting the gears. The center frame can be tilted forward from the position shown in Fig. 1 to the position shown in Fig. 2 and can be adjusted to any point between said positions by means of the slots L and the cap-screws I I.

I prefer to have the tilting arranged from a perpendicular to an angle of forty-five degrees therefrom; but it may be varied.

In practice two boards will preferably be placed at one and the same time in the machine, one of them being arranged vertically and the other horizontally, their edges overlapping one another, the boards being held in position by eccentrically-mounted rollers P and R of well-known construction. By tilting the machine in the manner described the boards may be dropped in by gravity and automatically carried to place. By making the pivotal shaft the driving-shaft I dispose of the counter-shaft, and thereby economize floor-

space and save considerable power which would be taken up by friction were a counter-shaft employed.

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

1. In a dovetailing-machine, the combination with a base-frame, and a horizontal driving-shaft journaled in the base-frame, of a tilting upper frame pivotally connected at its lower end on the driving-shaft and adjustably connected intermediate its ends to the base-frame, dovetailing machinery carried by the tilting frame, and means for actuating said machinery from the said driving-shaft, substantially as described.

2. In a dovetailing-machine, the combination with a base-frame and a horizontal driv-

ing-shaft journaled in the base-frame, of a tilting upper frame pivotally connected at its lower end on the driving-shaft and adjustably connected intermediate its ends to the base-frame, dovetailing machinery carried by the tilting frame and driven from said driving-shaft, and a head carried by the upper end of the tilting frame and provided with means for carrying two pieces of board at a time arranged at right angles to each other, substantially as described.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

CHARLES W. DAKE.

Witnesses:

MARY S. TOOKER,
A. C. DENISON.