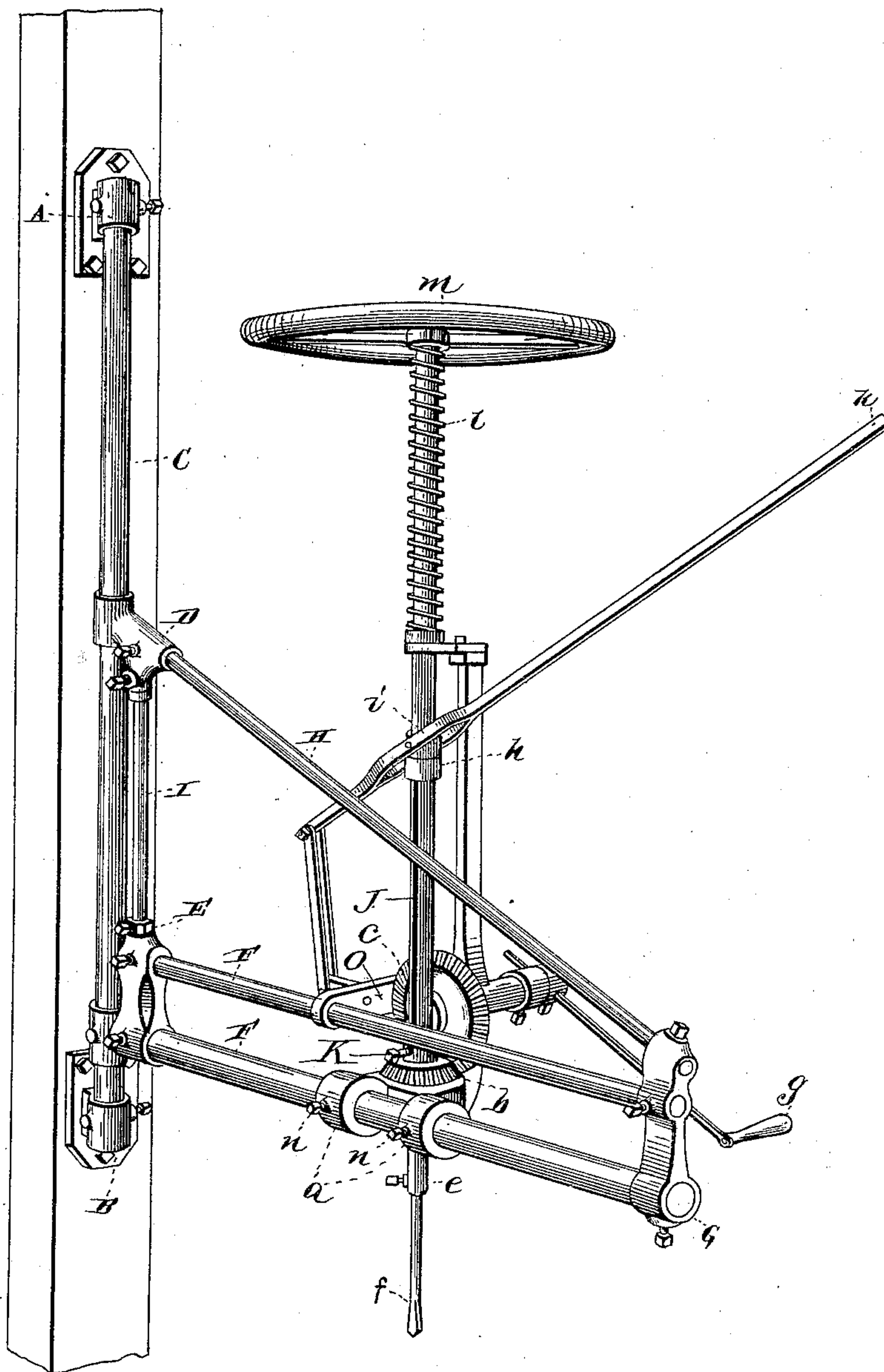


(No Model.)

A. F. SPAULDING.  
DRILLING MACHINE.

No. 466,806.

Patented Jan. 12, 1892.



Witnesses:  
M. H. Wooster.  
E. M. Wooster.

Inventor:  
A. F. Spaulding  
by R. B. Wooster, Atty.

# UNITED STATES PATENT OFFICE.

ALFRED F. SPAULDING, OF NORTHFIELD, VERMONT.

## DRILLING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 466,806, dated January 12, 1892.

Application filed July 8, 1891. Serial No. 398,855. (No model.)

*To all whom it may concern:*

Be it known that I, ALFRED F. SPAULDING, of Northfield, in the county of Washington and State of Vermont, have invented certain  
5 new and useful Improvements in Drilling-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 pertains to make  
10 and use it, reference being had to the accompanying drawing, which forms part of this specification.

My invention relates to that class of drills used for drilling marble; but it may be used  
15 for other purposes.

In the accompanying drawing the figure is a view in perspective of my improved drilling-machine.

A is the top hinge-hanger, and B the bottom, into which the upright shaft C is firmly secured at both ends by set-screws when the machine is in operation. When hangers A and B are to be operated as a hinge, set-screws which hold the upright shaft firmly  
25 in place are loosened.

D is a brace-hanger; E, horizontal-bar hanger, into which horizontal bars F F are securely fastened by set-screws.

By means of hangers D and E the machine-frame is moved up or down on shaft C and held at any desired point by a set-screw passing through hanger E.  
30

G is a coupling-casting to unite on a given angle horizontal bars F F and brace H, and they are firmly held in place by set-screws.  
35

I is a rod uniting brace-hanger to horizontal-bar hanger.

a is the machine-frame. b is a small bevel-gear mounted thereon; c, a large bevel-gear, also mounted on the frame and engaging gear b.  
40

e is a drill-spindle, having a longitudinal groove J, into which projects set-screw K, carried by the hub of gear b.

f is a drill used in drilling stone.  
45

g is a crank for hand-power, the turning of which puts in motion the gearing, causing spindle-shaft or drill-shaft e to revolve.

h is a tight collar firmly secured to drill-shaft e, and I is a loose collar embracing the shaft e. The feed-lever k is secured to the loose collar, and by pressing down on it the drill-shaft is fed downward and through bevel-gear b.

l is a spindle-spring to raise the shaft when desired, and m is the balance-wheel regulating the speed of the machine; n n, set-screws to hold machine-frame a firmly in place when the machine is in operation.

To hold frame a in an upright position, the upper frame-arm o is movably secured to horizontal bar F.

From the foregoing description it will be seen that the entire machine can be turned to any desired point, right or left, on hinge A and B, and that it can be moved up or down on the upright shaft C and held in place by a set-screw passing through hanger E; also that the machine-frame a can be moved on the horizontal bars F F to any point forward or backward at will and held in place by set-screws n n. By pressing down on the feed-lever k, which operates in connection with the tight and loose collars, the feed can be regulated to correspond to the speed of the drill, and when the drill has reached the proper depth it is raised to the original starting-point by spindle-spring l.  
75

What I claim as new, and desire a patent thereon, is—  
80

1. In a drilling-machine, a hinge-hanger A and B, upright shaft C, brace-hanger D, horizontal-bar hanger E, coupling-casting G, horizontal bars F F, brace H, and uniting-rod I, all substantially as set forth and described.  
85

2. In a drilling-machine, the frame a, small bevel-gear b, large bevel-gear c, drill-spindle f, crank g, tight collar h, loose collar i, feed-lever k, spindle-spring l, balance-wheel m, and set-screws n n, all substantially as set forth and described.  
90

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Witnesses:

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