No. 881,638. PATENTED MAR. 10, 1908.

C. B. WATTLES.

FLOOR DRESSING MACHINE.

APPLICATION FILED JUNE 12, 1905

Fig. 1.

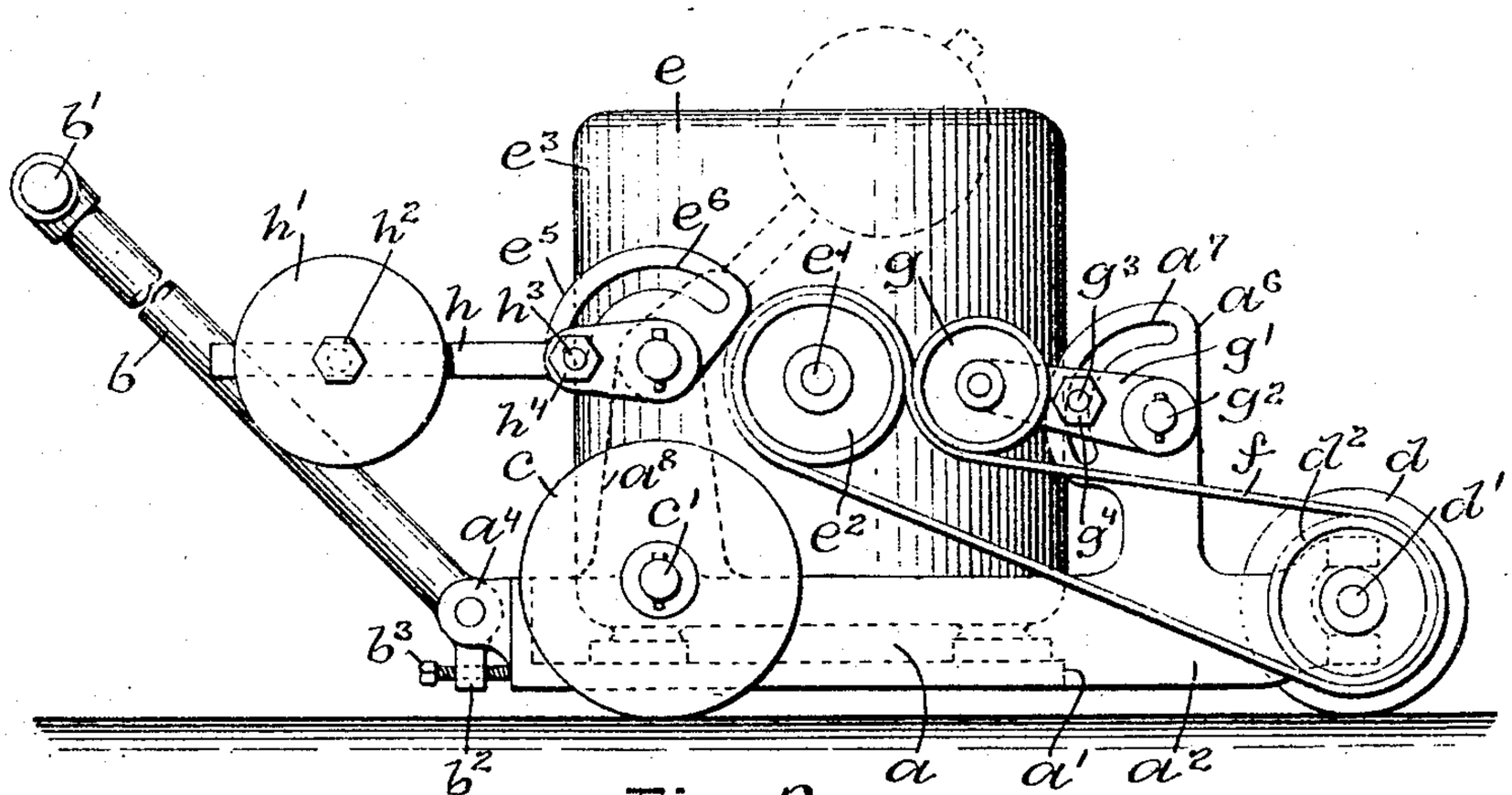
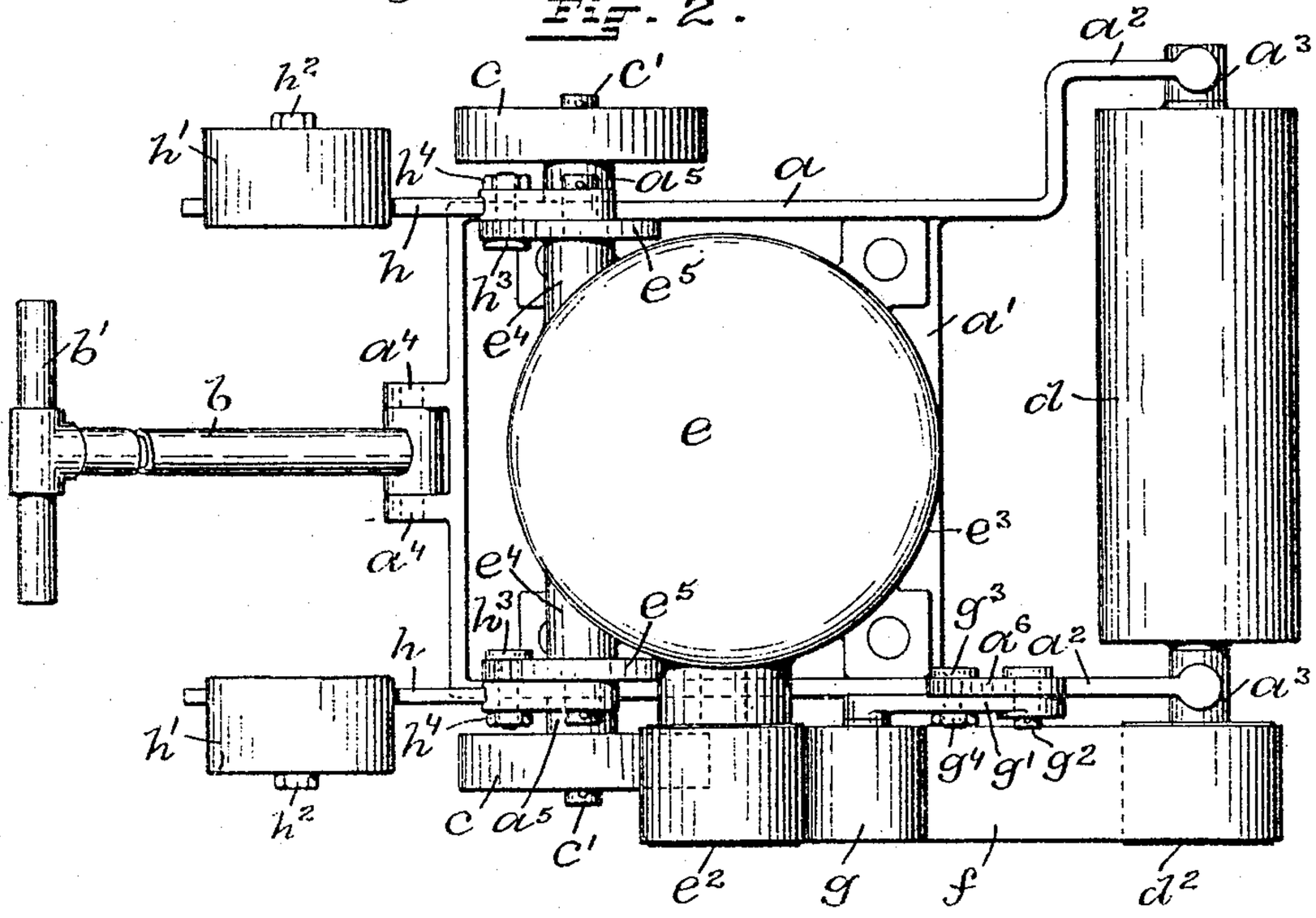


Fig. 2.



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CYRA B. WATTLES, OF PROVIDENCE, RHODE ISLAND, ASSIGNOR, BY MESNE ASSIGNMENTS, TO ELECTRIC FLOOR SURFACER COMPANY, OF GARDINER, MAINE, A CORPORATION OF MAINE.

FLOOR-DRESSING MACHINE.

No. 881,638. Specification of Letters Patent. Patented March 10, 1908.

Application filed June 12, 1905. Serial No. 264,851.

To all whom it may concern:

Be it known that I, CYRA B. WATTLES, a citizen of the United States, residing at Providence, in the county of Providence and State of Rhode Island, have invented a new and useful Improvement in Floor-Dressing Machines, of which the following is a specification.

This invention has reference to an improvement in floor dressing machines used for grinding, surfacing and polishing wood floors.

Wood floors are constructed of different kinds of wood which are hard or soft according to the species used, and in the use of a floor dressing machine require a different pressure to achieve the best result, also old floors that are badly worn require more pressure than new floors, and in using the machine for polishing a floor less pressure is required.

The object of my invention is to adjust the pressure of the grinding or polishing roll of a floor dressing machine on a floor, and I accomplish this object by the use of adjustable weighted levers on the machine, the adjustment of which brings more or less weight on the roll, also by adjusting the position of the handle to give an increased or decreased leverage of the handle on the machine.

My invention consists in the peculiar and novel construction of a floor dressing machine comprising a frame, a handle pivotally secured to the frame, means for adjusting the position of the handle, wheels supporting the rear of the frame, a grinding or polishing roller supporting the forward end of the frame, a motor rigidly secured to the frame, a belt connecting the driving pulley of the motor with a pulley on the roll shaft, means for adjusting the tension of the belt, and adjustable weighted levers pivotally secured in a position to bring more or less weight on the roll, with details of construction, as will be more fully set forth hereinafter.

Figure 1 is a side view of my improved floor dressing machine, showing the weighted levers in the position for exerting the least pressure on the roll in full lines, and in the position for exerting the greatest pressure on the roll in broken lines, with the handle of the machine broken away to more clearly show the invention, and Fig. 2 is a top plan view of the machine, showing the means for pivotally securing the weighted levers to the casing of the motor.

In the drawings, *a* indicates the frame, *b* the handle, *c c* the wheels, *d* the grinding or polishing roll, *e* the motor, *f* the belt, *g* the idler pulley, and *h h* the adjustable weighted levers of my improved floor dressing machine.

The frame *a* is constructed to have the body portion *a'* adapted to hold the motor *e*, the forwardly-extending arms a^2 a^2 supporting the bearings a^3 a^3 for the shaft of the roll *d*, the two rearwardly-extending lugs a^4 a^4 to which the lower end of the handle *b* is pivotally secured, the two bosses a^5 a^5 on the side of the body portion *a'* adjacent the rear part of the frame, and the upwardly-extending bracket a^6 having the semi-circular slot a^7 on the power side of the frame, as shown in Fig. 1.

The handle *b* has the T-shaped upper end b^2 and the downwardly-extending lug b^2 supporting the adjusting bolt b^3 on its lower end in a position to engage with the rear portion of the frame *a*, as shown in Fig. 1. The handle *b* is sufficiently long to bring the T-shaped upper end *b'* into a convenient position for the operator. In practice I find that the operator unconsciously exerts a certain pressure in a downward direction on the upper end of the handle, which acting through the wheels *c c* as a fulcrum, diminishes the pressure of the roller *d* on the floor. By adjusting the set bolt b^3 to raise or lower the upper end of the handle, the leverage of the handle (as acted upon by the operator) is decreased or increased and the pressure of the roller *d* on the floor is increased or decreased as desired.

The wheels *c c* are rotatably secured to the axles *c' c'* which are secured in the bosses a^5 a^5 on the frame *a* in any well known way. The wheels *c c* are placed in a position on the frame *a* to bring the greater weight of the frame *a* and the motor *e* on the roll *d*.

The roll *d* is secured to the shaft *d'* which is supported in the bearings a^3 a^3. A pulley d^2 is secured to the power end of the shaft *d'*,

as shown in Fig. 2. The roll d is covered with an abrasive material such as sand paper for grinding or surfacing a floor, or with a polishing material such as pile fabric for polishing the floor.

The motor e may be of any kind desired. In the preferred form I use an electric motor having the driving shaft e' with the pulley e^2 connected to the pulley d^2 on the shaft of the roll d by the belt f. The casing e^3 of the motor has on each side the outwardly-extending bosses e^4 e^4 placed directly above the axles of the wheels c c. The segmental members e^5 e^5 having the semi-circular slots e^6 e^6 are each secured to the end of a boss e^4 (or formed integral with the boss) in a position to bring the slot above the boss, as shown in Fig. 1.

The idler pulley g is rotatably secured to the free end of the arm g' which is pivotally secured at its upper end to the upwardly-extending bracket a^6 by the pin g^2, in a position to bring the pulley g over the belt f and adjacent the driving pulley e^2, as shown in Fig. 1. A bolt g^3 extends through the slot a^7 in the bracket a^6 and through a hole in the arm g' where it is secured by the nut g^4. By this construction the tension of the belt f on the pulleys is adjusted by raising or lowering the idler pulley g.

The weighted levers h h are pivotally secured at each side of the machine to the bosses e^4 e^4. A heavy weight h' is adjustably secured to each lever by the set bolt h^2 and a bolt h^3 extends through the semi-circular slot e^6 in the segmental member e^5 and through a hole in the lever h where it is secured by the nut h^4, as shown in Fig. 1. By this construction the levers h h are adjustably secured to the motor casing so as to bring the weights h' h' into a position to decrease the pressure on the roll d, as shown in full lines in Fig. 1, or to increase the pressure on the roll d, as shown in broken lines in Fig. 1. It is evident that the levers h h may be adjusted to give any intermediate pressure desired, also one lever may be adjusted to bring the weight to the rear and the other adjusted to bring its weight to the front of the machine, thus giving an infinite number of variations to the pressure of the roller d on the floor.

In the use of my improved floor dressing machine the motor e revolves the dressing roll d on the floor at a high rate of speed through the pulley e^2, the belt f, and the pulley d^2 on the roll shaft d', while the operator moves the machine on the floor by the handle b, and the pressure of the dressing roll d on the floor is easily and quickly varied by adjusting the position of the weighted levers h h or the position of the handle b.

It is evident that the weighted lever h could be pivotally secured to a vertical arm a^8 forming a part of the frame a, as shown in broken lines in Fig. 1, without materially affecting the spirit of my invention.

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

1. In a floor dressing machine, the combination of a frame, wheels rotatably secured to the frame, a dressing roll rotatably secured in bearings to the frame, a motor secured to the frame, and means for operatively connecting the motor to the dressing roll to revolve the roll, of a segmental member, a lever adjustably secured to the segmental member and a weight adjustably secured to the lever, as and for the purpose set forth.

2. In a floor dressing machine, a dressing roll d, a boss e^4, a segmental member e^5 having the semi-circular slot e^6 secured to the boss e^4, a lever h pivotally secured to the boss e^4, a weight h' adjustably secured to the lever h by a set bolt h^2, and a bolt h^3 adapted to extend through the circular slot e^6 in the member e^5 and through a hole in the lever h where it is secured by a nut h^4, whereby the lever h is adjusted to bring the weight h' away from or over the dressing roller d to decrease or increase the weight on the dressing roll, thereby decreasing or increasing the pressure of the dressing roll on a floor, means for securing the boss e^4 to the machine, and means for revolving the dressing roll d, as described.

3. In a floor dressing machine, the combination of a frame a having the body portion a', the forwardly-extending arms a^2 a^2 supporting the bearings a^3 a^3, the two rearwardly-extending lugs a^4 a^4, the bosses a^5 a^5 on the side of the body a', and the upwardly-extending bracket a^6 having the semi-circular slot a^7, a handle b having the T-shaped upper end b', the downwardly-extending lug b^2 in which is the adjusting bolt b^3, the wheels c c rotatably secured to the axles c' c' which are secured to the bosses a^5 a^5 on the frame a, a dressing roll d secured to a shaft d' which is supported in the bearings a^3 a^3, a pulley d^2 secured to the end of the shaft d', a motor e rigidly secured to the frame a and having the driving shaft e', the pulley e^2, the casing e^3 having the bosses e^4 e^4, the segmental member e^5 e^5 having the semi-circular slots e^6 e^6 secured to the bosses e^4 e^4, a belt f connecting the pulley d^2 with the pulley e^2, an idler pulley g rotatably secured to the free end of an arm g' which is pivotally secured to the bracket a^6, a bolt g^3 adapted to extend through the semi-circular slot a^7 in the bracket a^6 and through a hole in the arm g' where it is secured by the nut g^4, a lever h pivotally secured to the boss e^4, a weight h' adjustably secured to the lever h, and a bolt h^3 adapted to extend through the semi-cir-

cular slot e^6 in the segmental member e^5 and through a hole in the lever h where it is secured by a nut h^4, whereby the handle b is adjusted and the weighted lever h is adjusted to bring more or less weight on the dressing roll d to vary the pressure of the dressing roll on a floor, as described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

CYRA B. WATTLES.

Witnesses:

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