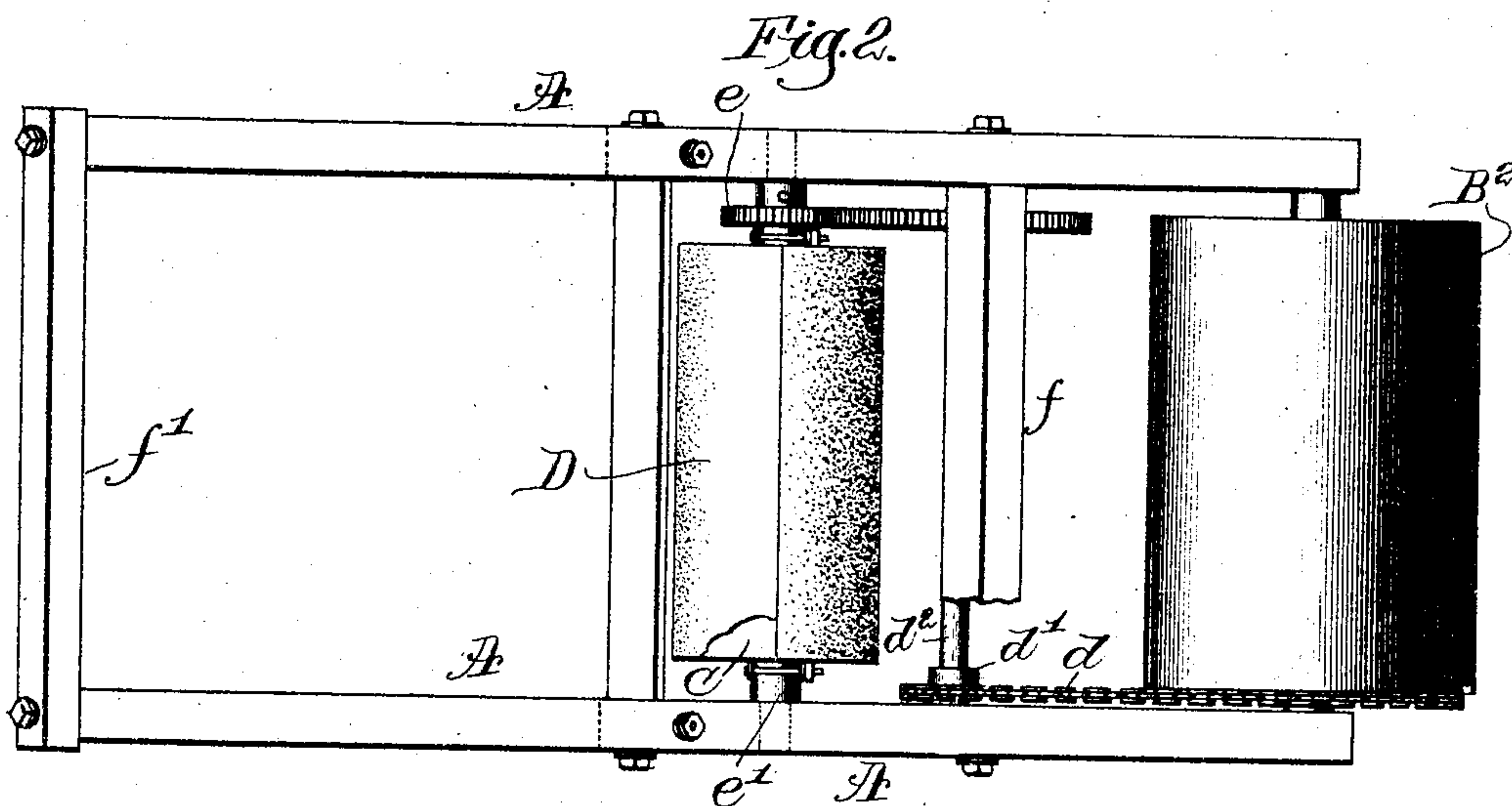
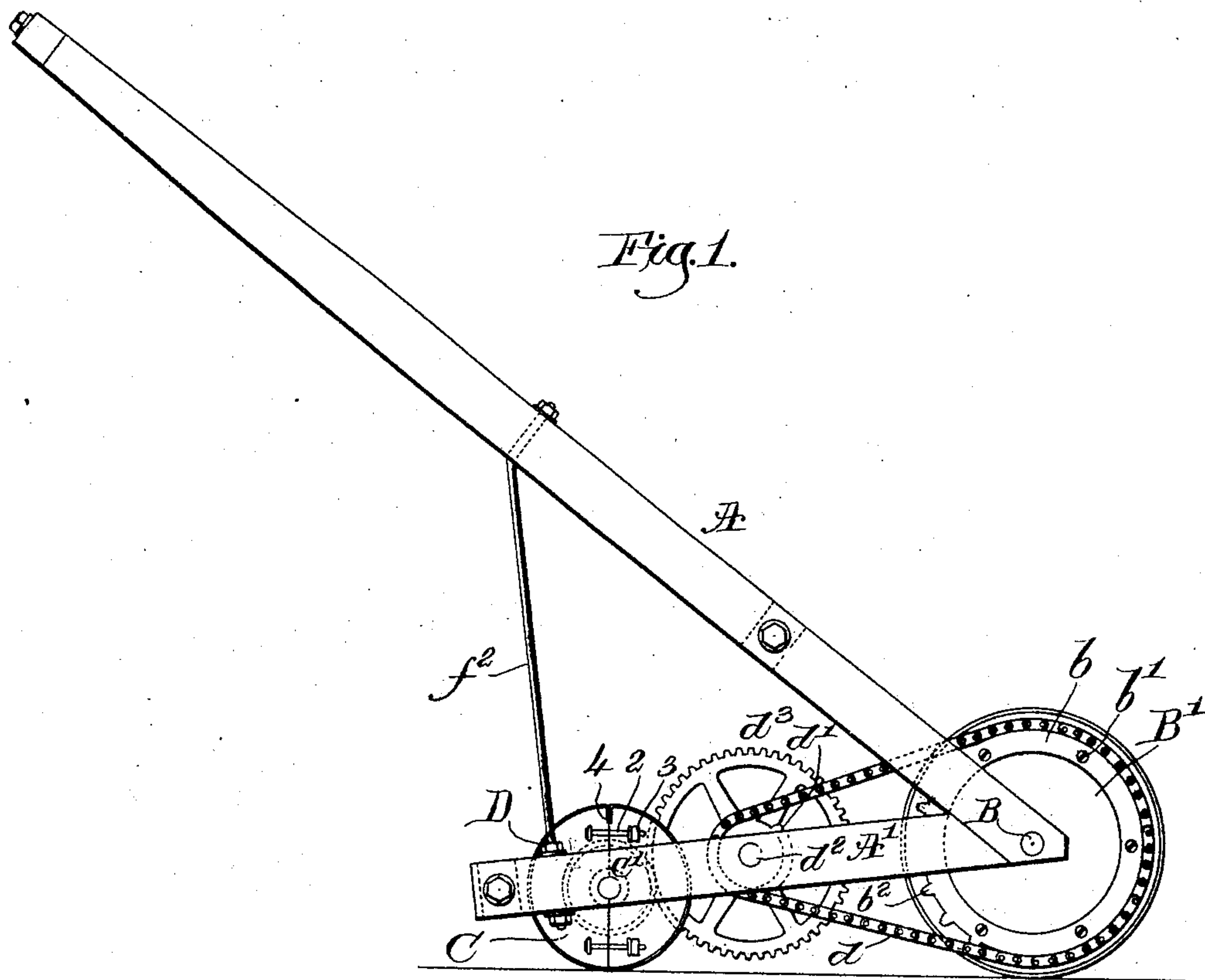


No. 786,309.

PATENTED APR. 4, 1905.

G. N. PARKER.  
SURFACE FINISHING MACHINE.  
APPLICATION FILED MAR. 26, 1904.



Witnesses.  
Thomas Drummond  
Edward H. Allen

Inventor.  
George N. Parker,  
by Lewis H. Mason, Attys.

# UNITED STATES PATENT OFFICE.

GEORGE N. PARKER, OF BOSTON, MASSACHUSETTS.

## SURFACE-FINISHING MACHINE.

SPECIFICATION forming part of Letters Patent No. 786,309, dated April 4, 1905.

Application filed March 26, 1904. Serial No. 200,133.

*To all whom it may concern:*

Be it known that I, GEORGE N. PARKER, a citizen of the United States, residing at Boston, in the county of Suffolk and State of Massachusetts, have invented an Improvement in Surface-Finishing Machines, of which the following description, in connection with the accompanying drawings, is a specification, like letters on the drawings representing like parts.

This invention has for its object the production of a novel machine by which to surface-finish floors or any wooden surface—such, for instance, as the bed of a bowling-alley and kindred constructions.

It is well understood that the bed of a bowling-alley is composed of wood in narrow strips clamped together and that the wood by the action of balls thereon is at times damaged or dented, and to maintain the standard efficiency of the face of the alley as to smoothness of surface the alley has to be dressed—*i. e.*, at times acted upon by a plane and then polished. So, also, in hard wood and other floors in a building it is frequently necessary to dress the floor—*i. e.*, to smooth it to remove dents or to polish the same after having treated the floor with any mixture to bring it up to its standard quality.

The machine to be herein described and claimed comprises a roller having a frictional surface that may be rolled over the floor or other wooden structure to be finished, said roller driving at high speed the finishing-roller, the finishing-roller having, preferably, a removable jacket.

The special features in which my invention resides will be hereinafter pointed out at the end of this specification.

Figure 1 shows in side elevation a finishing-machine representing my invention, and Fig. 2 is a top or plan view thereof.

My novel machine includes as its essential features a framework A A', in which is held the journal B of a heavy pilot-roller B', covered with a friction-surface B<sup>2</sup>. This roller may be a cylinder of heavy wood or of metal, and the friction-surface B<sup>2</sup> may be of india-rubber in the form of a tube or otherwise applied to the body of the roller.

The other essential member of my improved

machine is the surfacing-roller C, the journal C' of which is held in a part of the framework. This roller is made, preferably, of wood, in two parts, and is fixed to the journal C', so as to be rotated in said framework. The two halves of the roller C may be clamped firmly together about the journal by means of bolts 2, extended through suitable eyes of the roller and having nuts 3, that may be turned to cause the bolt to hold the two parts of the roller firmly together and to the journal. The roller C is notched at its abutting faces to receive the ends 4 of a covering D, used for surfacing the wood, said covering being composed of either emery cloth or paper or it may be of felt carrying abrasive or other material desired, according to the work to be done by the surfacing-roller. Fig. 1 shows the ends of the cover clamped about the surfacing-roller. To drive this surfacing-roller rapidly and positively from the pilot-roller B', I provide the latter roller at one end with a metal plate b, connected therewith by screws b', said plate having a series of teeth b<sup>2</sup>, thus making of said plate a sprocket-wheel that engages a sprocket-chain d, that is extended over a smaller sprocket-wheel d', fast on an intermediate shaft d<sup>2</sup>, sustained in the frame and having at its opposite end a toothed wheel d<sup>3</sup> of very much larger diameter. The teeth of the wheel d<sup>3</sup> engage the teeth of a smaller pinion e, that is pinned to the journal C' of the surfacing-roller.

The frame shown is composed of hand-bars A, upwardly inclined from bars A', the latter sustaining the shaft d<sup>2</sup> and journals C'. The bars comprising this frame are united by suitable cross-pieces f f', and A and A' are united by uprights f<sup>2</sup>. The operator will engage the cross-piece f' and roll the apparatus over the floor, and he may increase the effectiveness of the surfacing-roller by bearing more or less of his weight on the upwardly-inclined hand-bars A. When emery, sandpaper, or other abrasive covering is used on the roller C, the surface of the wood will be reduced or worn down to the desired level, and thereafter by changing the covering and using the felt, which may be covered with oil or any other substance it is desired to put upon the



floor to finish it, the final finishing of the floor may be accomplished.

I prefer to use india-rubber for the jacket B<sup>2</sup> of the pilot-roller; but any other friction material that will roll over and not slip on the floor to be treated may be used without departing from my invention.

While I have illustrated the framework as composed of wood, it will be understood that I may use any other suitable material, as tubing.

This invention is not limited to exactly the means shown intermediate the pilot-rolls and the surfacing-rolls to actuate the latter. It will also be understood that the floor over which the machine is rolled may be abraded more at one part than at another simply by the operator bringing the surfacing-rolls with more or less force against the wood.

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

1. A floor-finishing machine comprising a heavy cylindrical pilot-roller provided at its end with a sprocket-wheel, a surfacing-roller provided at its periphery with an abrasive material and having at one end a small toothed wheel, an intermediate shaft provided with a small sprocket-pinion and a large toothed wheel, and a sprocket-chain connecting the sprocket-gear and pinion and rotating the intermediate shaft, causing the toothed gear

thereon in engagement with the smaller pinion on the surfacing-roller to rotate the same at a high speed.

2. A floor-finishing machine comprising a frame sustaining at its front end the shaft of a heavy cylindrical pilot-roller provided with a frictional jacket, a shaft at the rear end of said frame provided with a surfacing-roller having its periphery covered with abrasive material, means to retain the abrasive material on said surfacing-roller, a pinion on the shaft of said surfacing-roller, and an intermediate shaft  $d^2$  having at one end a small sprocket-wheel and at its opposite end a larger toothed gear, the latter gear engaging the smaller pinion on the surfacing-roller shaft, and a sprocket-wheel connected with one end of the heavy pilot-roller, and a chain driven thereby encircling the smaller sprocket-wheel on said intermediate shaft, whereby as the frame containing the pilot-roller and surfacing-roller is moved slowly over a surface the surfacing-roller is rotated rapidly to abrade the surface.

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

GEORGE N. PARKER.

Witnesses:

GEO. W. GREGORY,  
CHARLES DREW.