No. 698,501. Patented Apr. 29. 1902.

F. HOPKINS.

SANDPAPERING MACHINE.

(Application filed Nov. 11, 1901.)

(No Model.)

Fig. 1.

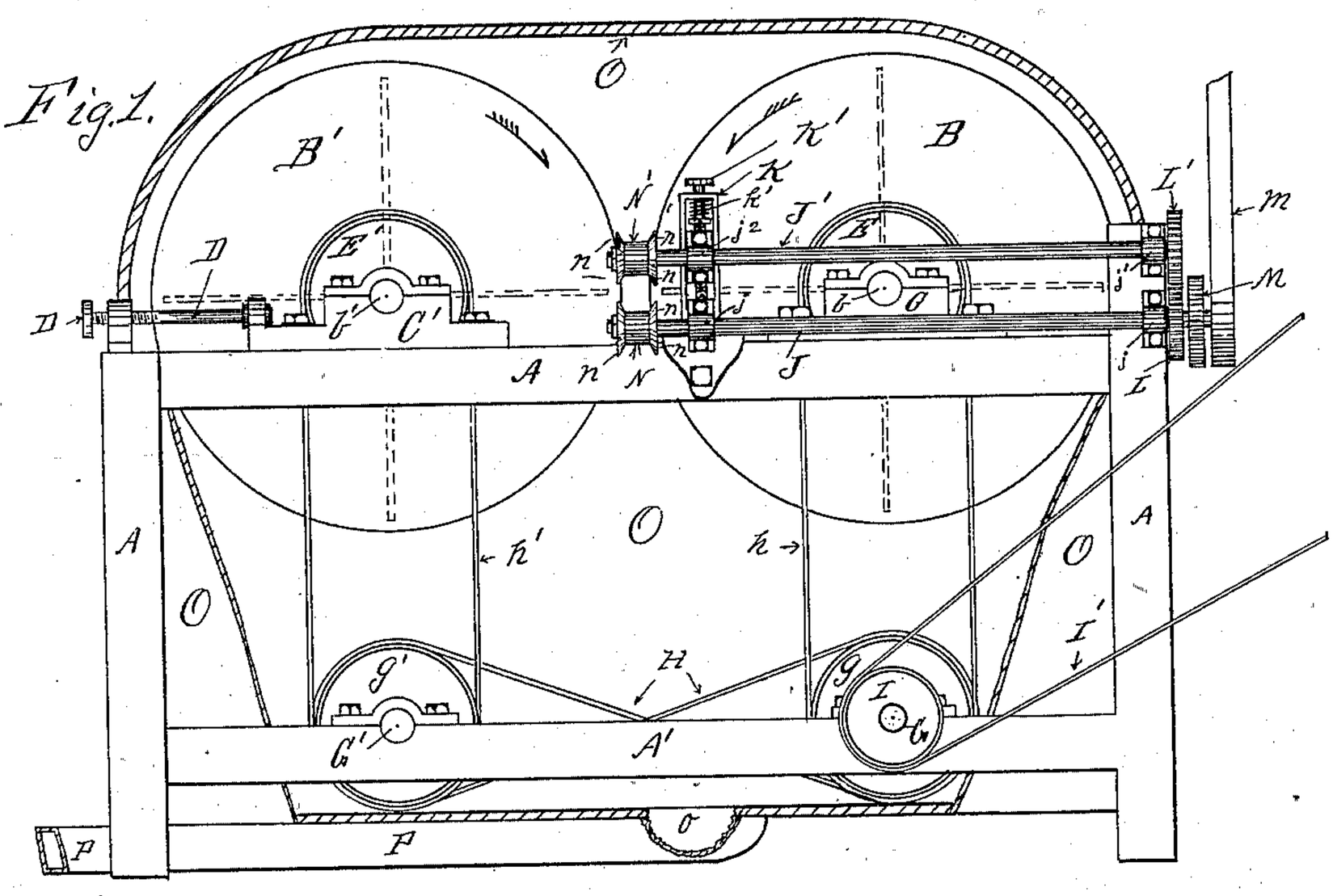


Fig. 2.

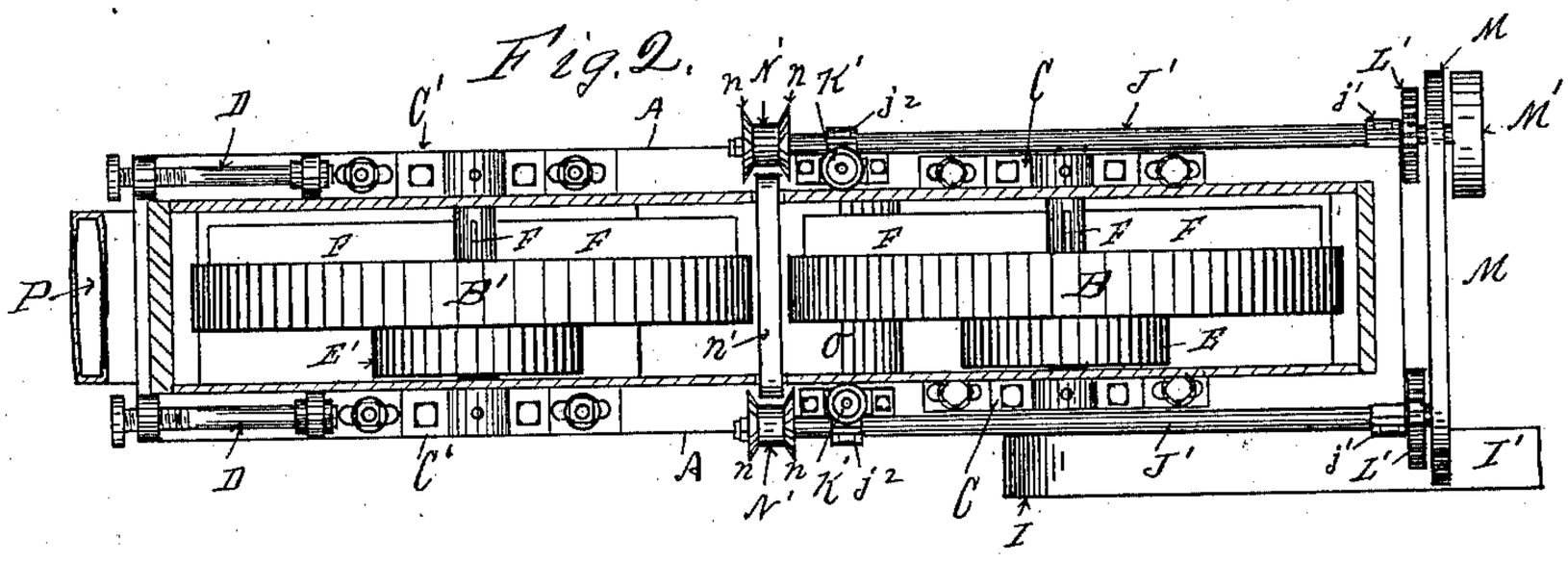
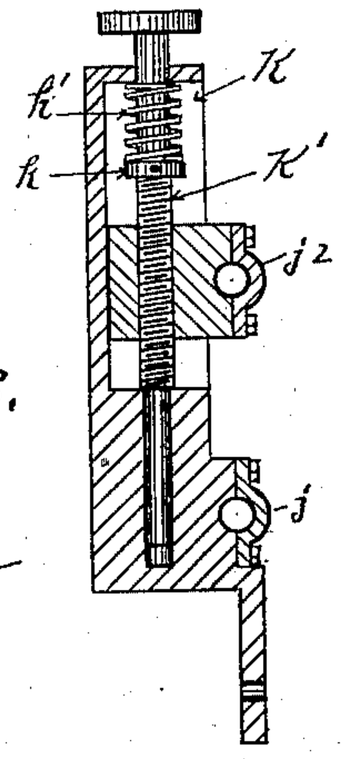


Fig. 3.



Witnesses.
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UNITED STATES PATENT OFFICE.

FRANK HOPKINS, OF MILESGROVE, PENNSYLVANIA.

SANDPAPERING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 698,501, dated April 29, 1902.

Application filed November 11, 1901. Serial No. 81,885. (No model.)

To all whom it may concern:

Be it known that I, FRANK HOPKINS, a citizen of the United States, residing at Milesgrove, in the county of Erie and State of Pennsylvania, have invented certain new and useful Improvements in Sandpapering-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 appertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, forming part of this specification.

My invention relates to improvements in sandpapering-machines, and has for its object the construction of a machine adapted to transversely sandpaper and finish the sides of strips of wood passed therethrough; and it consists in the construction and arrangement of the mechanism thereof, substantially as hereinafter set forth and described, and illustrated in the accompanying drawings, in which—

Figure 1 is a side view in elevation of my improved sandpapering-machine with the side of the case broken away. Fig. 2 is a top or plan view of the same with the top of the case broken away. Fig. 3 is a sectional detail view of a portion of the machine.

In the drawings illustrating my invention, A is a machine-frame. Upon the top of this frame I mount sand-drums B B′, the shaft *b* of the drum B being mounted in adjustable bearings C, and the shaft *b′* of the drum B′ being mounted in adjustable bearings C′, provided with adjusting-screws D, so that the drum B′ can be readily moved toward and away from the drum B as desired. At one side of the drums B B′, I secure driving-pulleys E and E′, and upon the opposite sides of the drums B B′, I secure four blades F, as and for the purpose hereinafter set forth. Upon the lower part A′ of the frame I mount shafts G and G′, upon which I secure equal-sized pulleys *g g′*, upon the inner ends of which a cross-belt operates, H, and from the outer end of the pulley *g* a belt *h* extends to the pulley E, and from the outer end of the pulley *g′* a belt *h′* extends to the pulley E′, and on the outer end of the shaft G there is a driving-pulley I, from which a belt I′ extends to a suitable actuating power, (not shown,) by means whereof the mechanism hereinbefore described is driven. On the top of each side of the frame are also mounted the shafts J J′ of feed-rolls N N′. The shafts J are mounted in fixed bearings *j j*, and the shafts J′ are mounted in fixed bearings *j′* at their outer ends and in yielding adjustable bearings j^2 at their inner ends, as is clearly shown in Fig. 3. These adjustable bearings j^2 preferably consist of a vertical slotted frame K, in which the bearing j^2 can be moved up and down by means of the screw K′, which is provided with a collar *k* and a spring *k′*, by means whereof the bearings j^2 will yield to pressure in an upward direction. The outer ends of the shafts J J′ are geared together by means of equal-sized gears L L′, and the shafts J J at each side of the machine are provided with equal-sized pulleys over which a belt M operates to drive all of the shafts J J′ in unison. I also provide a driving-pulley M′ on one of the shafts J, from which a belt *m* extends to a suitable actuating-pulley. (Not shown.)

On the inner ends of the shafts J J′, I secure removable feed-rolls N N′. These rolls are provided with flanges *n*, which operate not only to guide the sticks placed between the rolls N N′ and retain them in proper relation to the faces of the sand-drums B B′, but also operate to compress and round the sharp corners of sticks passed between them. To the frame A, between the feed-rolls N N′, I secure guide-strip *n′* to prevent the ends of the sticks passing between the rolls N N′ being carried downward by the action of the sand-drums thereon. Around and inclosing the sand-drums B B′, the pulleys E E′, fan-blades F, pulleys *g g′*, and belts H, *h*, and *h′* I secure a case O, which entirely incloses these parts and which case is provided with an outlet *o*, from which a lateral spout P extends and through which the dust produced by the operation of the sand-drums is driven out by the operation of the fan-blades F.

Having thus described the mechanism of my invention and the operation thereof, so as to enable others to utilize the same, what I claim as new, and desire to secure by Letters Patent of the United States, is—

1. In a sandpapering-machine the combi-

nation of two sand-drums, one of which is adjustable, and mechanism for driving them, fan-blades at one side of each of said drums, flanged feed-rolls at each side of the machine, a case inclosing said drums and fans, and a spout connected with said case, for carrying off the dust therefrom, substantially as set forth.

2. In a sandpapering-machine, the combination of two sand-drums one of which is mounted on adjustable bearings, fan-blades at one side of each of said drums, and flanged feed-rollers at each side of the machine, one of which rolls is provided with a yielding bearing, and mechanism for driving said feed-rolls in unison substantially as and for the purpose set forth.

3. In a sandpapering-machine, the combination of sand-drums B B′, adjustable bearings C′ for the drum B′, fans F and pulleys on the shaft of each drum, driving-pulleys g g' a cross-belt H and belts h h', flanged feed-rolls N N′ at each side of the machine, shafts and mechanism for driving said feed-rolls, adjustable and yielding bearings j^2 for the upper of said feed-rolls, a case O inclosing the sand-drums and fan mechanism, and a spout P leading therefrom, substantially as and for the purpose set forth.

In testimony whereof I affix my signature in presence of two witnesses.

FRANK HOPKINS.

Witnesses:
HAROLD M. STURGEON,
F. A. BLILEY.