A. THOMPSON.

POLISHING MACHINE.

APPLICATION FILED MAR. 26, 1910.

975,088. Patented Nov. 8, 1910.

Fig. 1.

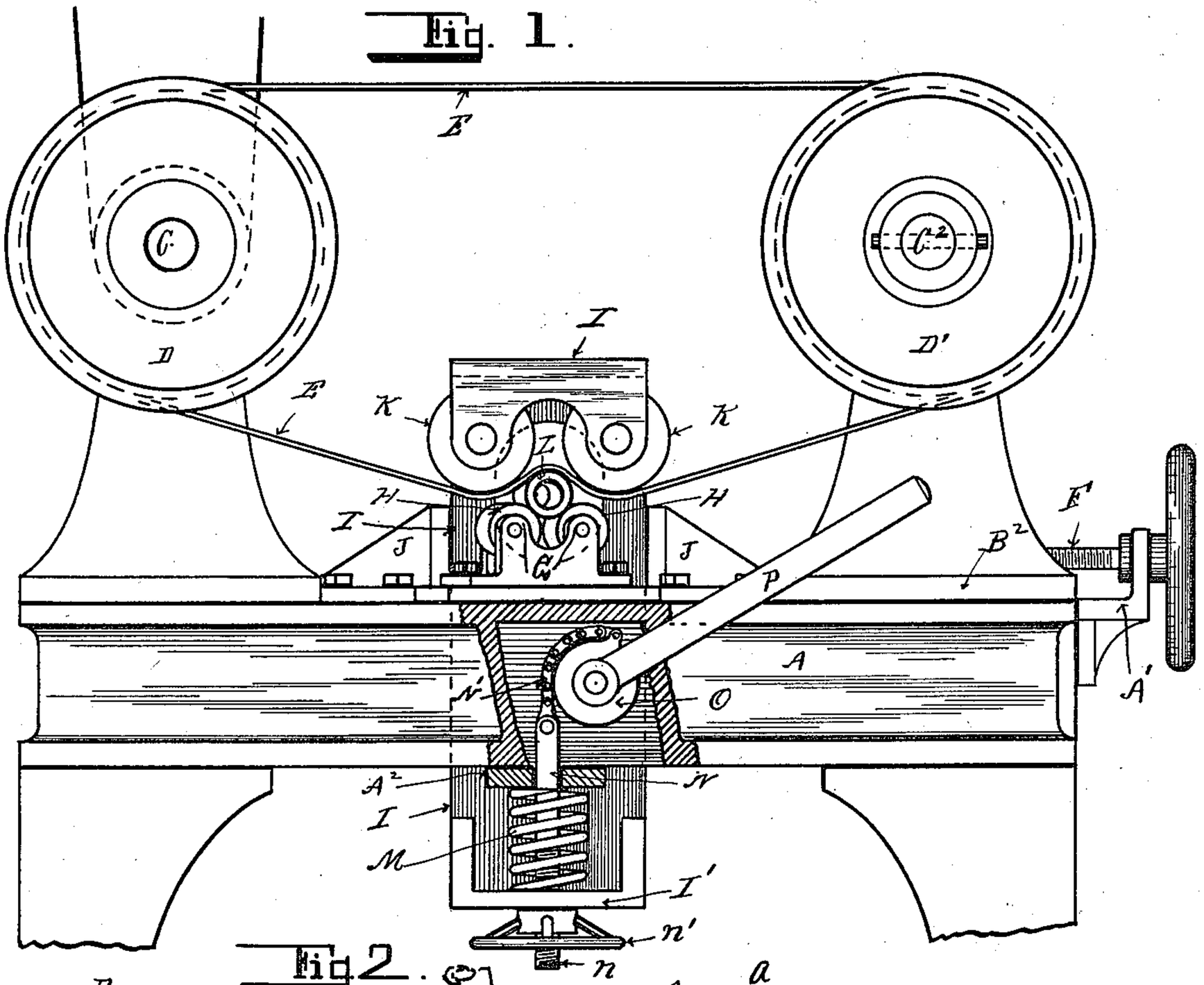
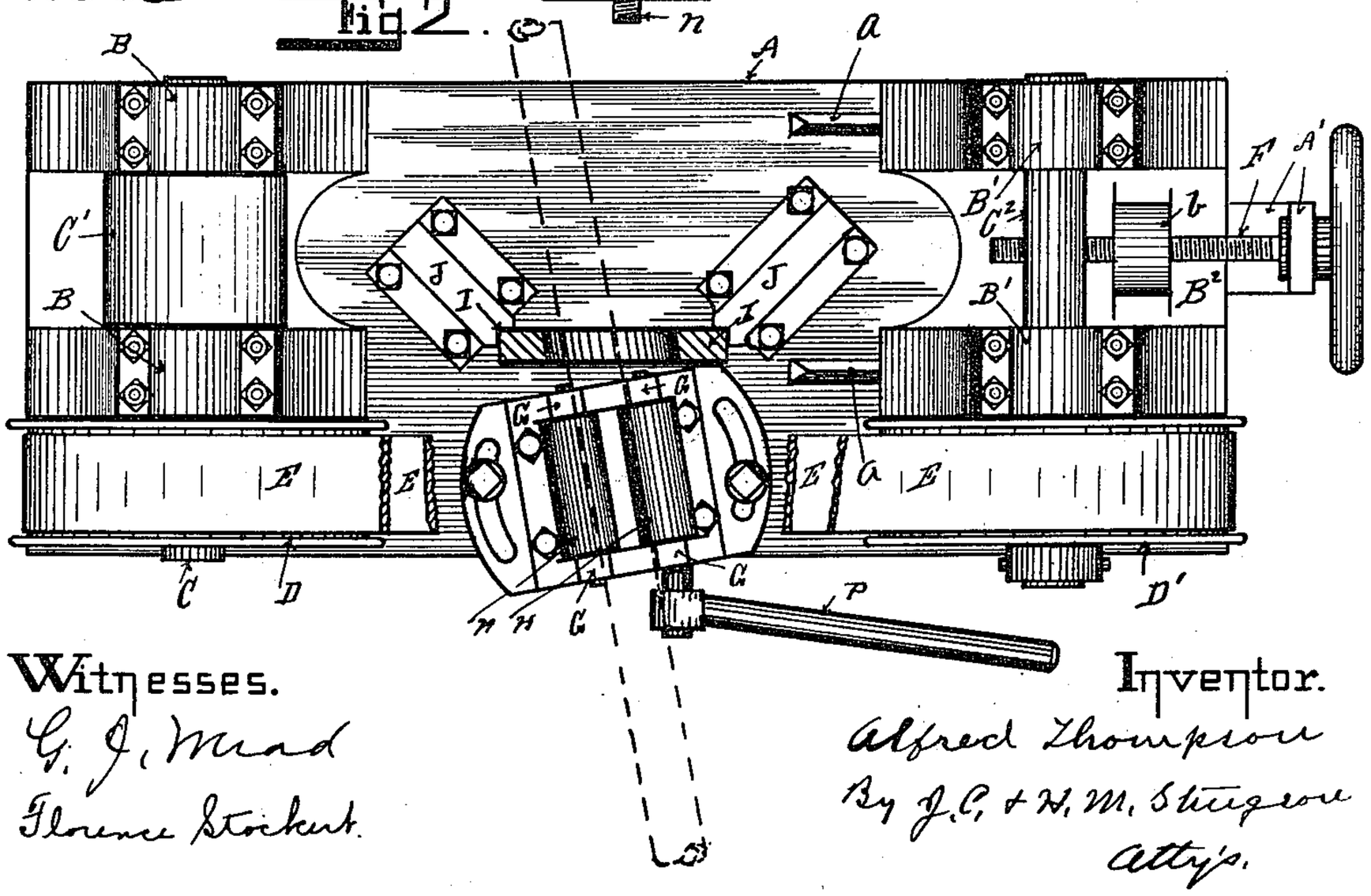


Fig. 2.



Witnesses.

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UNITED STATES PATENT OFFICE.

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POLISHING-MACHINE.

975,088. Specification of Letters Patent. Patented Nov. 8, 1910.

Application filed March 26, 1910. Serial No. 551,759.

To all whom it may concern:

Be it known that I, ALFRED THOMPSON, a citizen of the United States, residing at Erie, in the county of Erie and State of Pennsylvania, have invented certain new and useful Improvements in Polishing-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 polishing machines, and has for its object the construction of a machine for polishing tubes and rods, which is adapted to automatically feed the rod through the machine and at the same time polish the surface thereof, and consists substantially of a polishing belt with rollers below said belt for supporting a tube diagonally to the line of travel of said belt, and vertically movable rollers above said belt adapted to be brought into contact with the belt so as to force it down upon a tube or rod placed upon the supporting rollers.

The features of my invention are hereinafter fully set forth and explained and illustrated in the accompanying drawings in which:

Figure 1 is a side view in elevation of my improved tube or rod polishing machine with parts broken away. Fig. 2 is a top or plan view of the same with parts broken away.

In these drawings illustrating my invention A is the frame of the machine. On one side of the frame there is mounted in bearings B B a shaft C provided with a driving pulley C′, and on the end of the shaft C there is a flanged pulley D adapted to carry a polishing belt E. On the opposite end of the frame A there are bearings B′ B′ mounted on a frame B^2 adapted to be moved inward and outward on ways *a a* on the frame A, by means of an adjusting screw F mounted in an arm A′ on the frame A and operating in a boss *b* on the frame B^2. In the bearings B′ there is mounted a shaft C^2 on which a flanged pulley D′ is mounted in line with the flanged pulley D, and which pulleys D and D′ carry the polishing belt E. The adjustability of the frame B^2 and the mechanism carried thereby being for the purpose of regulating the tension of the polishing belt E.

In bearings G G on the central part of the top of the frame A, I mount rollers H H directly under the belt E and adjustable diagonally to the line of travel thereof, and on a vertically movable frame I, operating through a slot in the frame A and between guides J J thereon, I mount rollers K K directly above the rollers H H, and preferably set at right angles to the travel of the belt E. These rollers K K overhang the belt E and are adapted to be brought down upon said belt so as to press it down upon a tube or rod L resting upon the rollers H H. On the lower end of the vertically movable part I, there is a projection I′ and between that and a projection A^2 on the under side of the frame A there is a spring M adapted to press the rollers K down upon the belt E with a yielding pressure. Extending through the spiral spring M and through the projection I′ on the part I there is a rod N provided on its lower end with screw-threads *n* and a hand-wheel *n′* whereby it can be adjusted, and its upper end is attached to a section of chain N′ which passes over a pulley O mounted in the frame A, and provided with a hand-lever P, whereby the frame I carrying the rollers K K can be raised up thereby lifting the rollers K K off of the belt E when it is desired.

In operation the rollers K K are raised to permit the end of a tube or rod L to be inserted under the belt E, between it and the rollers H H. The rollers K are then brought down upon the belt E, substantially as illustrated in Fig. 1. The travel of the polishing belt E serves to rotate the tube or rod L upon the supporting rollers H which being diagonal to the travel of the belt causes the tube or rod L to steadily travel forward under the belt E so as to submit all parts of its surface to the polishing action of said belt.

Having thus described my invention so as to enable others to construct and operate the same, what I claim as new and desire to secure by Letters Patent is:

1. The combination in a tube or rod polishing machine, of a polishing belt, pulleys for carrying and operating said belt, a pair of tube supporting rollers under said belt arranged diagonally to the line of the travel

of said belt, pressure rollers mounted above said belt and the diagonal rollers thereunder, and means for raising and lowering said pressure rollers, substantially as set forth.

2. The combination in a tube or rod polishing machine of a polishing belt, pulleys adjustable away from and toward each other for carrying and operating said belt, tube supporting rollers mounted under said belt diagonally adjustable to the line of its travel, a vertically movable frame overhanging said belt, rollers mounted therein above said belt and over the diagonal supporting rollers, and means for raising said rollers out of contact with said belt, substantially as set forth.

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

ALFRED THOMPSON.

Witnesses:

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