

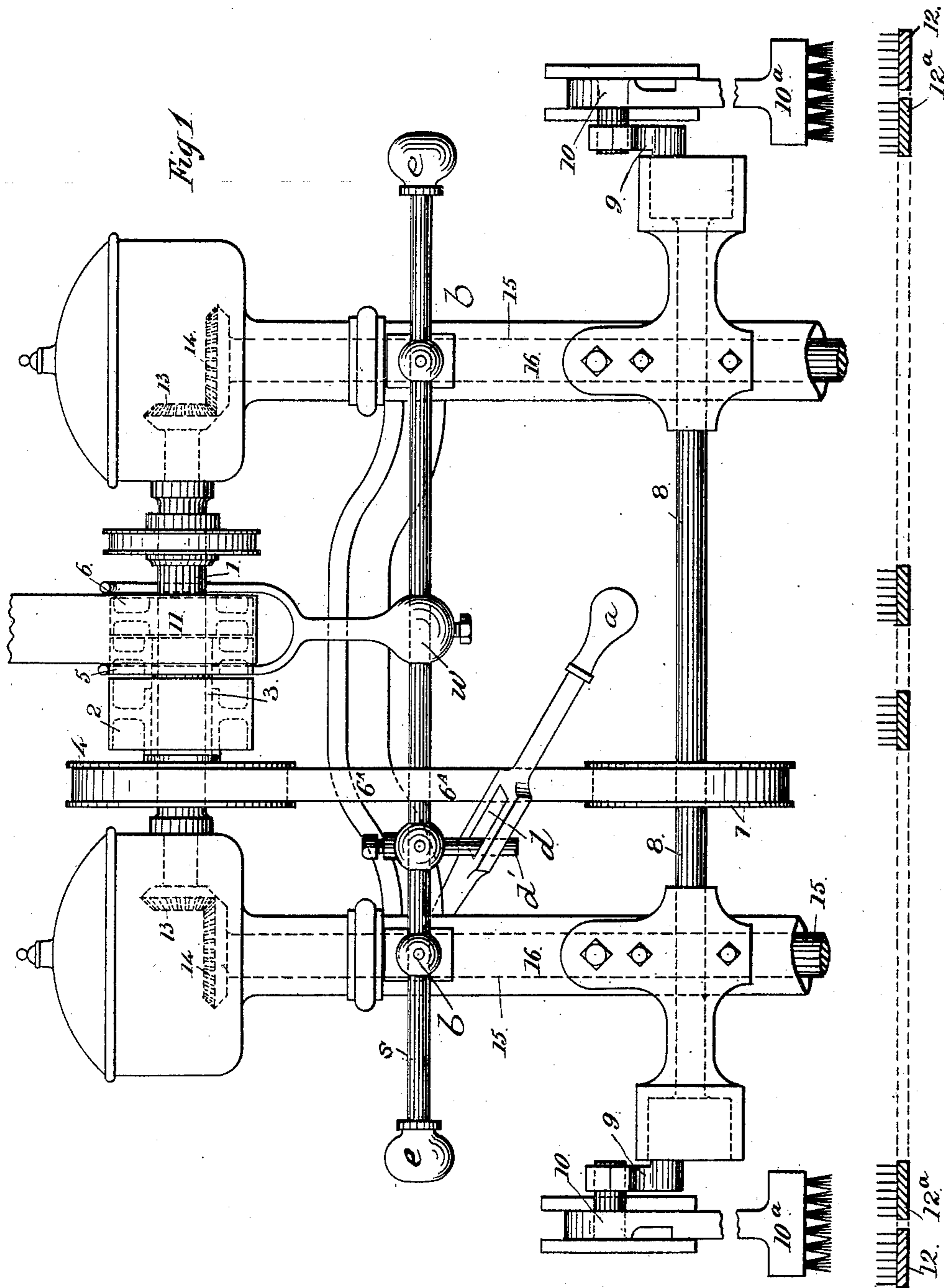
(No Model.)

3 Sheets—Sheet 1.

J., C., L. & M. JEFFERSON.
COMBING MACHINE.

No. 353,224.

Patented Nov. 23, 1886.



Attest:

F. L. Middleton

C. L. Sturtevant

INVENTORS:

Joseph Jefferson

Cornelius Jefferson

Lazarus Jefferson

Mordcai Jefferson

by Joyce & Spear Attys.

(No Model.)

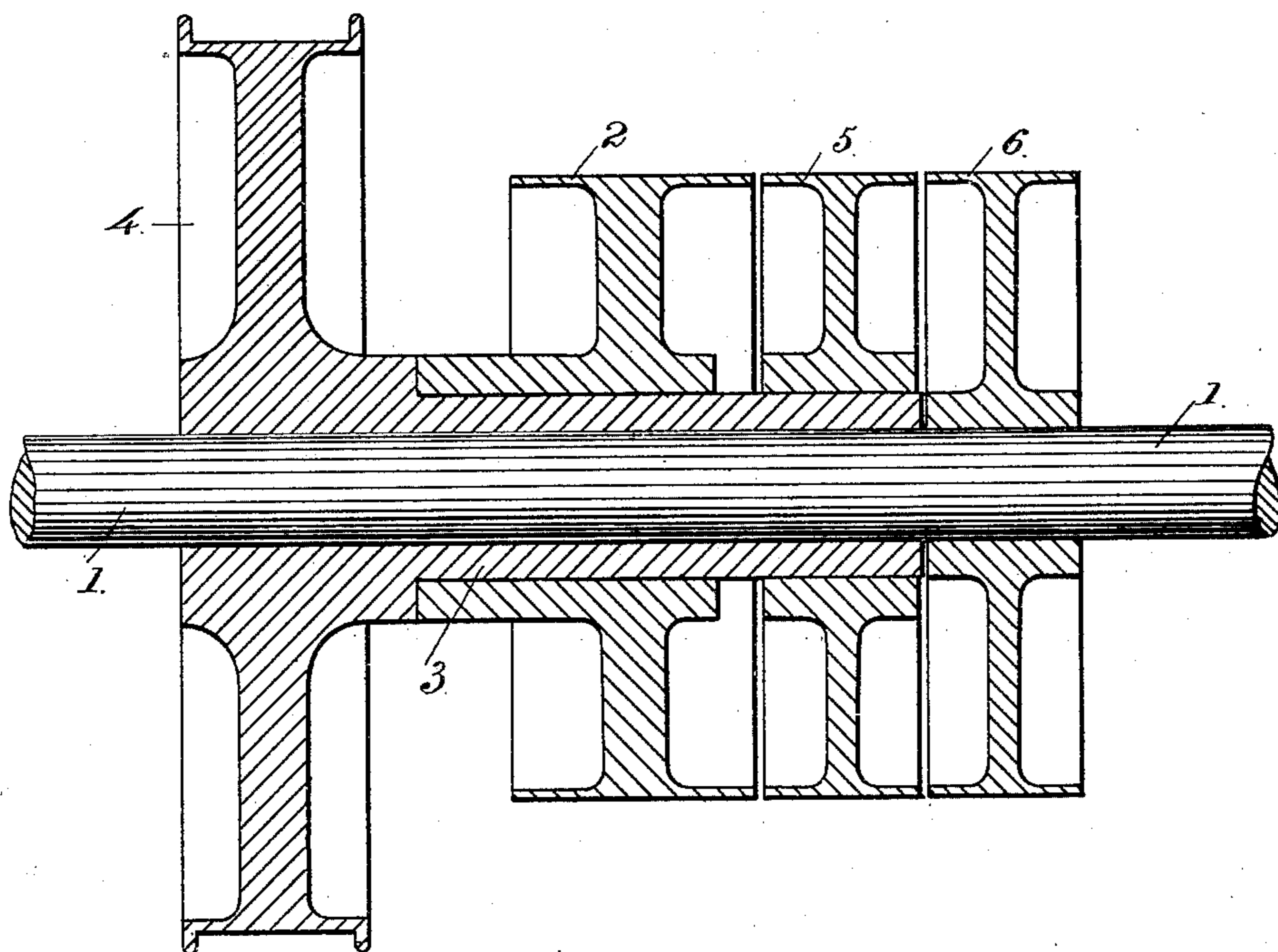
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Fig. 2.



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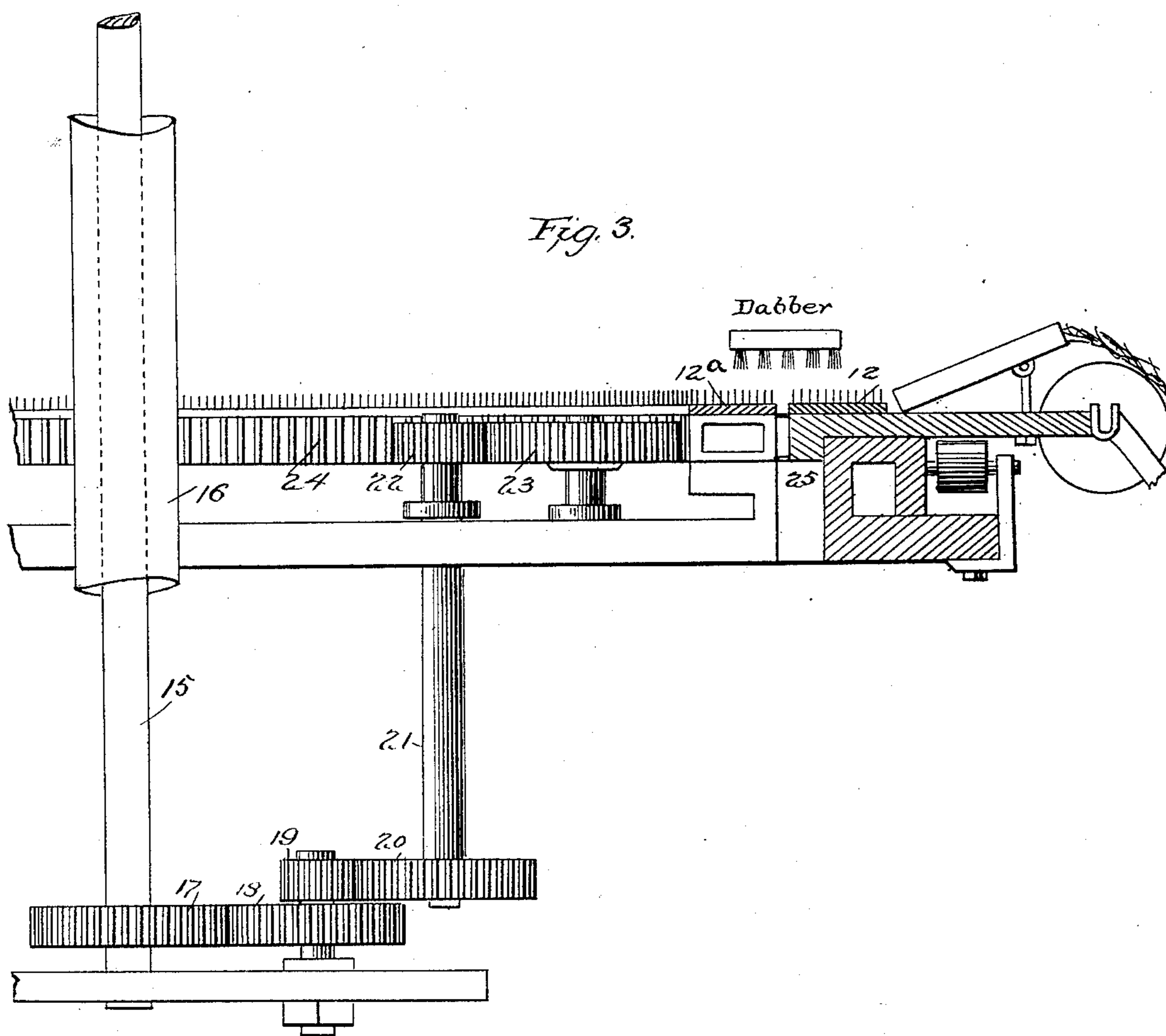
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UNITED STATES PATENT OFFICE.

JOSEPH JEFFERSON, CORNELIUS JEFFERSON, LAZARUS JEFFERSON, AND
MORDECAI JEFFERSON, OF BRADFORD, COUNTY OF YORK, ENGLAND.

COMBING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 353,224, dated November 23, 1886.

Application filed March 4, 1886. Serial No. 193,918. (No model.) Patented in England October 20, 1884, No. 13,839.

To all whom it may concern:

Be it known that we, JOSEPH JEFFERSON, CORNELIUS JEFFERSON, LAZARUS JEFFERSON, and MORDECAI JEFFERSON, subjects of Her Majesty the Queen of Great Britain, and residents of Bradford, in the county of York, England, have invented certain new and useful Improvements in Combing-Machines for Wool and other Like Fibers, (for which we have obtained Letters Patent in Great Britain No. 13,839, bearing date October 20, 1884,) of which the following is a specification.

The invention relates to that class of machines employed for combing wool and similar fibrous material in which two or more circular revolving combs are employed, as in what is known as "Noble's Combing-Machine." In this machine, as at present constructed, it is found that on starting or re-starting the circular combs they move before the dabbing-brushes attain any considerable speed, or before their effective motion is arrived at, so that a portion of the wool or fiber rises, or is not sufficiently dabbed or forced into and among the pins of the combs, and is carried onward without being combed or cleaned and cleared of all "noil" or waste.

The object of our invention is to obviate the above defect, which we do by the arrangement of parts hereinafter described, whereby the dabbing-brushes are set in motion before the combs, and are enabled to run after the latter have ceased, reference being made to the accompanying drawings, in which—

Figure 1 is an elevation of such a portion of the well-known "Noble's Combing-Machine" as is necessary to illustrate our improvement with the combs in section, Fig. 2 being an enlarged sectional view of the driving-pulleys, with a portion of the driving-shaft in elevation. Fig. 3 is an elevation, partly in section, of the combs and mechanism for driving the same.

Similar letters refer to the corresponding parts in all the figures.

In the drawings, 1 indicates the main driving-shaft of the machine, on which is loosely mounted a pulley, 4, having an elongated boss, 3, which in turn carries a broad loose pulley, 2, and a narrower fixed pulley, 5. Alongside of the latter, but fixed to the main shaft 1, is

a driving-pulley, 6. The pulley 5, being attached to the boss 3, drives it and pulley 4, which communicates motion by the strap 6^a, pulley 7, shaft 8, and cranks 9 to the slides 10 10 of the dabbing-brushes 10^a 10^a, as clearly shown in Fig. 1.

The main driving belt or strap 11 is provided with shifting mechanisms, which may be briefly described as follows: A suitable shifting-fork is carried upon a bar or rod, S, the arms of said fork extending upon either side of the belt in the usual manner. The rod or bar is supported in bearings *b b*, so as to have longitudinal sliding movement, and is provided with suitable knobs or handles, *e e*, at the ends thereof, whereby the bar may be grasped by the hand and given a sliding movement to shift the belt. A lever, *a*, is also provided to effect this same movement, and, as shown, is provided with a slot, *d*, through which a pin, *d'*, secured to the rod or bar S, projects.

It will be seen that by shifting the main driving-strap 11 from the loose pulley 2 to the fixed pulley 6, to operate the circular combs 12 12^a 12^a, the strap must first pass to, upon, and in part over the pulley 5, thus communicating motion to the dabbing-brushes before reaching the pulley 6, which, through gear-wheels 13 13 14 14 and vertical shafts 15 15 working in the hollow uprights 16 16, communicates motion to the circular combs 12 12^a 12^a and other parts of the machine in the ordinary manner.

As shown in Fig. 3, motion is communicated from the upright shaft 15 to the comb by a train of gearing. Upon the inner periphery of the comb 12^a is a circular rack, 24, into which meshes the gear 23, journaled upon a suitable pin or stud. The gear 23 receives motion from a pinion, 22, carried upon the upper end of a shaft, 21, upon the lower end of which is fixed a gear, 29. A gear, 18, and pinion 19 are both fixed to a small shaft, as shown. The former receives motion from a gear, 17, on the shaft 15, and the latter communicates motion to the shaft 21 through its gear 20. By this train of gearing the inner circular comb is actuated. The outer comb is also provided with gear-teeth on its inner periphery, and motion to this comb is given

through teeth 25 on the outer periphery of comb 12^a meshing therewith.

The start given to the dabbing-brushes 10^a insures the wool or fiber being effectually 5 dabbed down into the pins before the combs commence to move and rotate for the purpose of clearing the long fibers of the noil and waste. The main strap 11 drives both pulleys 5 and 6, as shown in Fig. 1.

10 In stopping the machine, the band 11 is transferred clear of the pulley 6, thus ceasing driving the combs; but, so long as it remains on the pulley 5, it will continue giving motion to the pulley 4, and consequently the dabbing- 15 brushes, while the speed of the combs is reducing, or even after they are stationary, until it is transferred to the loose pulley 2.

What we claim as our invention, and desire to secure by Letters Patent, is—

20 1. In combination with the dabbing-brushes and combs of a combing-machine, a pulley and intermediate mechanism for driving the brushes, a second pulley, and intermediate mechanism for driving the combs, said pulley 25 being placed at one side of the first-mentioned

pulley, a loose pulley situated upon the other side of the first-mentioned pulley, and a belt adapted in size to act upon both the driving-pulleys at the same time, substantially as described.

2. In combination with the dabbing-brushes and combs of a combing-machine, a main driving-shaft and intermediate mechanism for actuating the combs, a fixed pulley on said shaft adapted to receive motion from the driving-power, a loose pulley mounted on a sleeve 35 on the shaft, a pulley fixed to the sleeve between the loose and fixed pulleys, intermediate mechanism for communicating the motion of the sleeve to the brushes, and a suitable 40 belt adapted to act upon the fixed pulleys at the same time, substantially as described.

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