

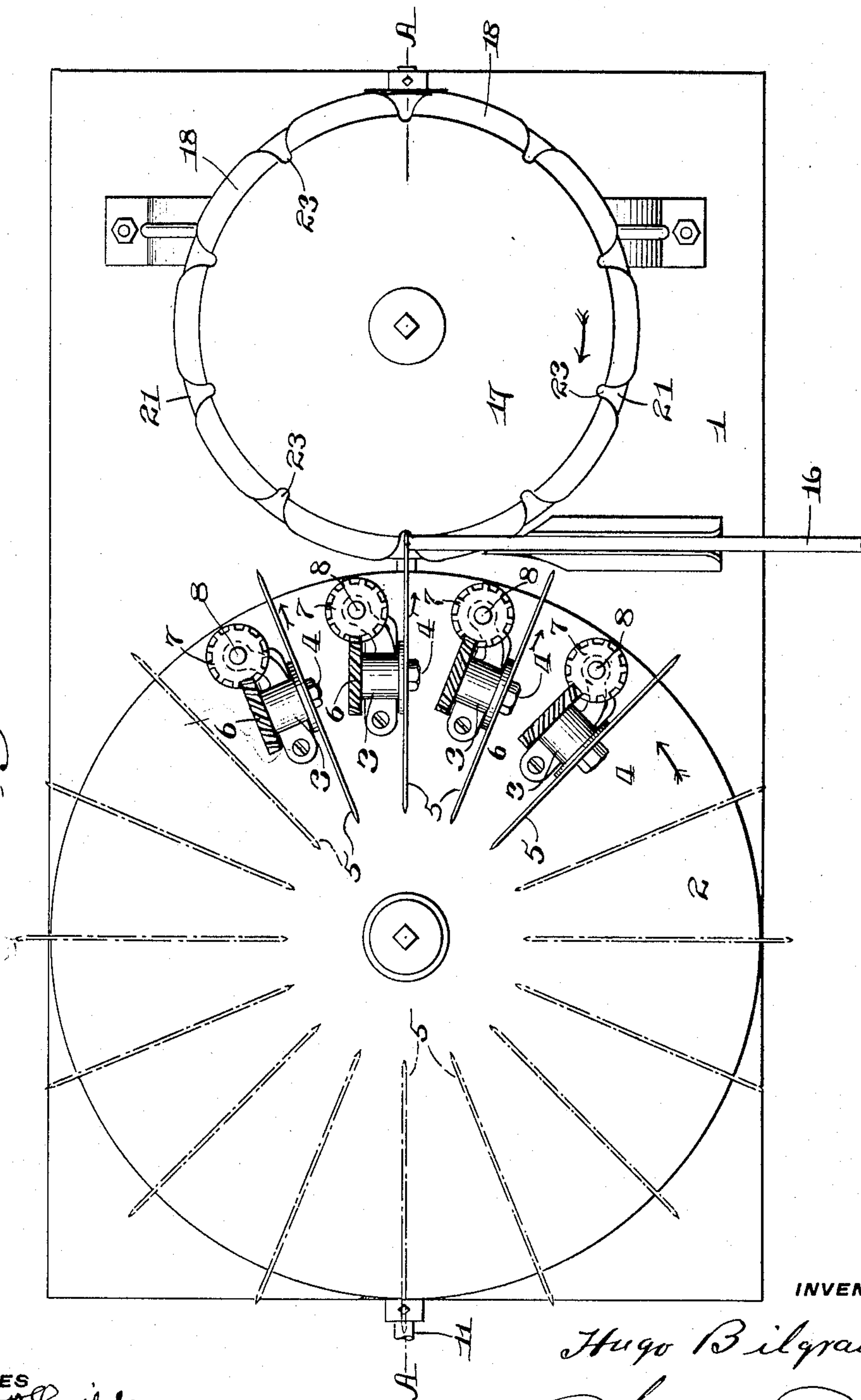
H. BILGRAM.  
CONTINUOUS CIGARETTE CUTTING MACHINE.  
APPLICATION FILED JUNE 8, 1909.

955,113.

Patented Apr. 12, 1910.

3 SHEETS—SHEET 1.

Fig. 1.



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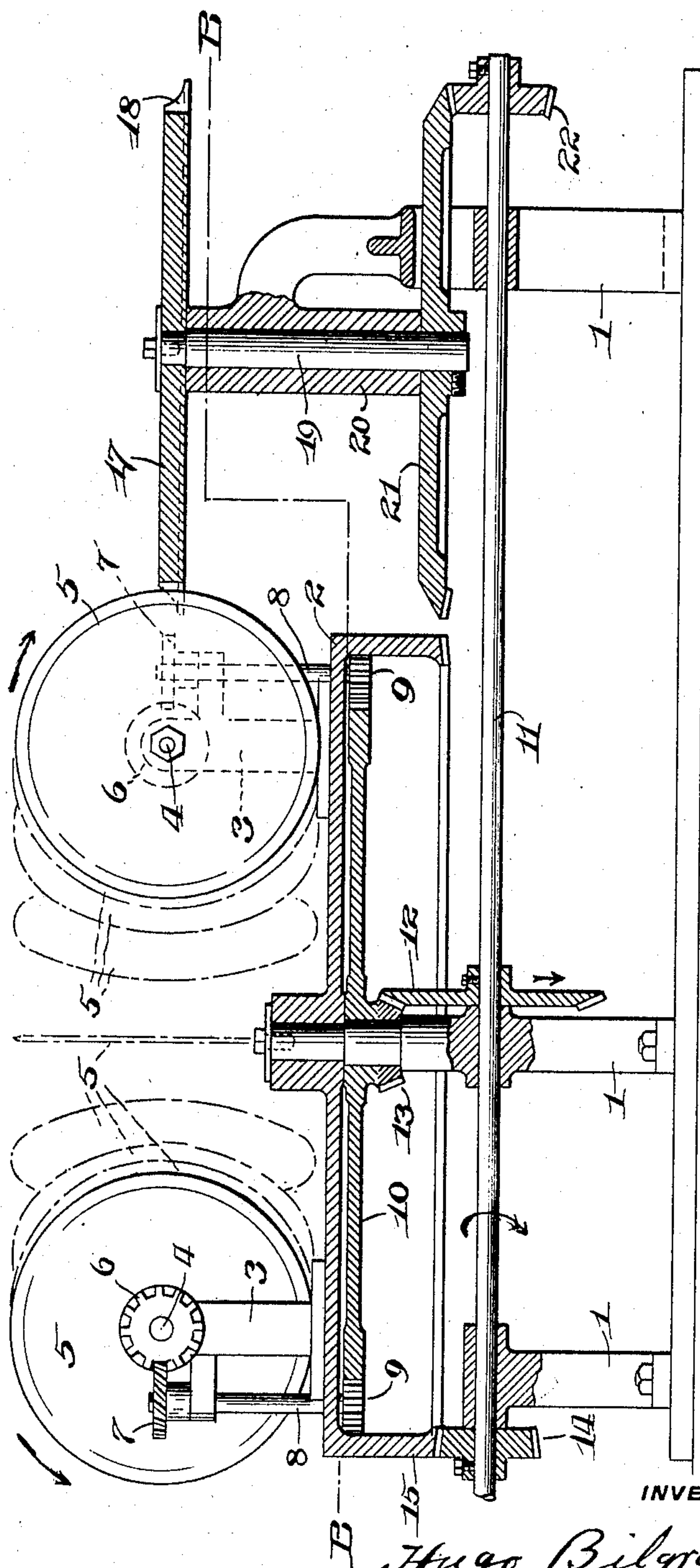
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3 SHEETS—SHEET 2.

*Fig. 2.*



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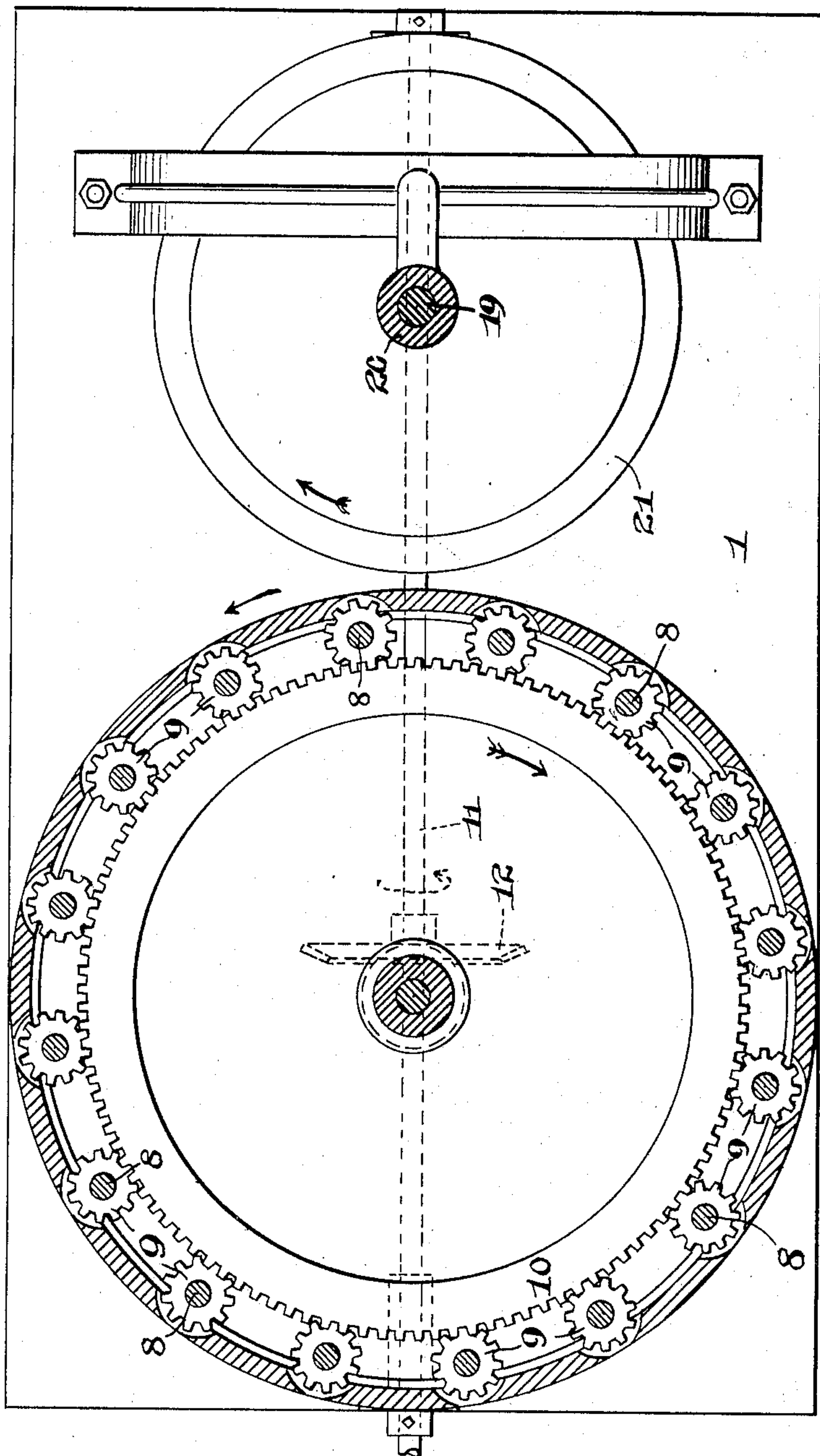
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3 SHEETS—SHEET 3.

Fig. 3.



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# UNITED STATES PATENT OFFICE.

HUGO BILGRAM, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNOR TO COMAS CIGARETTE MACHINE COMPANY, OF SALEM, VIRGINIA, A CORPORATION OF VIRGINIA.

## CONTINUOUS-CIGARETTE-CUTTING MACHINE.

955,113.

Specification of Letters Patent.

Patented Apr. 12, 1910.

Application filed June 8, 1909. Serial No. 500,912.

*To all whom it may concern:*

Be it known that I, HUGO BILGRAM, a citizen of the United States, and a resident of the city and county of Philadelphia, State of Pennsylvania, have invented certain new and useful Improvements in Continuous-Cigarette-Cutting Machines, of which the following is a specification.

My invention relates to improvements in machines for cutting a continuous cigarette into predetermined lengths after it has been formed and as it leaves the machine in which it is made, and the object of my invention is to furnish a cutting device which can be operated at a much higher speed than the present devices, which operate with a double reciprocating or elliptic movement, which will be free from the very objectionable vibration which follows the operation of said devices when running at a high speed shaking and disarranging the cigarette machine and even the building in which machines are located.

In my improved cutting off machine I mount a number of rotary knives on a rotatable carrier and furnish suitable means for driving said carrier and knives, and I furnish a plate or wheel preferably circular in plan and rotatable, in opposition to the cutting edges of the knives for the purpose of giving support to the cigarette while being cut.

In the accompanying drawings forming part of this specification and in which similar numerals of reference indicate similar parts throughout the several views: Figure 1, is a plan of my improved continuous cigarette cutting device; Fig. 2, a section of the machine on line A—A, Fig. 1; Fig. 3, a section of Fig. 2 on line B—B.

1 is the frame of the machine which rotatably carries a carrier 2 upon which are mounted standards 3 which carry shafts 4 upon one end of which are mounted the cutting knives 5 and upon the other a helicoidal wheel 6.

7 are helicoidal wheels, gearing with wheels 6, which are carried upon shafts 8, and 9 are spur wheels upon these shafts gearing into a gear wheel 10. The shafts 8 are carried in suitable bearings carried by the carrier 2 and the standards 3.

11 is a shaft, carried by frame 1, which may be driven by any suitable means, not shown.

12 is a bevel gear carried by and turning with shaft 11 which meshes with and drives a bevel gear 13 carried by, or forming part of, gear wheel 10.

14 is a bevel gear, carried by and turning with shaft 11, which meshes with and drives a gear 15 secured to or forming part of the carrier 2.

Upon the revolution of the shaft 11 the gear wheel 10 will be driven in the direction of the arrows, Fig. 3, from right to left, and, through the gearing shown, will drive the cutters 5 from left to right. At the same time the bevel gear 14 will rotate the gear 15 and the carrier 2 in the opposite direction, that is from left to right as shown by arrow, Fig. 3. The cigarette 16 after leaving the machine in which it is made passes to a support or plate 17 which holds it while the knives 5 cut it to length. This support or plate is revolved, its peripheral speed being equal to the speed of the cigarette as it leaves the making machine, while, for purposes of clearance, the speed of the carrier 2, which carries the knives to and through the cigarette, is a trifle greater. The support or plate 17 is grooved at 18 so as to form a support for the cigarette and is carried by a shaft 19 which is carried in a bearing 20 carried by frame 1. To the lower end of the shaft 19 is secured a bevel gear 21 which is driven by a bevel gear 22 carried by shaft 11.

23 are notches in the periphery of the plate 17 to permit the knives to pass completely through the cigarette.

The operation of the machine will be readily understood from the drawings and foregoing description and it will be only necessary to supplement this by the statement that the knives 5 are so spaced at their outer ends that the distance of one from the other is practically equal to the length of the cigarette to be cut.

The movements of all parts of the machine are rotary and its operation is practically without vibration.

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

1. In a device for cutting into lengths the continuous cigarette of a cigarette machine, the combination of a carrier, a series of circular knives mounted in a substantially radial manner upon said carrier,



means for transmitting rotary motion to said carrier, means for transmitting rotary motion to said knives, a rotatable notched plate or ring adapted to support the cigarette which being cut, said knives being adapted to enter the notches in said plate and means for transmitting rotary motion to said plate or ring.

2. In a machine for cutting a continuous cigarette into lengths, in combination, a frame, a carrier rotatably carried by said frame, a series of standards carried by said carrier, circular knives carried by said standards, a support for holding the cigarette while being cut, a main driving shaft, a train of gearing driven by said shaft for rotating said knives, and a gearing driven by said shaft for rotating said carrier.

3. In a machine for cutting a continuous cigarette into lengths, in combination, a frame, a carrier rotatably carried upon said frame, a series of standards carried by said carrier, circular knives carried by said standards, a rotatable notched support for holding the cigarette while being cut, said knives being adapted to enter the notches in said plate, a shaft secured to said support, a bearing for carrying said shaft, a driving shaft, and separate means actuated by the movements of said shaft for driving said knives, said carrier, and said cigarette support.

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