April 21, 1959 F. FROMM 2,882,737

DRIVE FOR COMBING BEAMS AND CARDS OF TEXTILE SPINNING MACHINES

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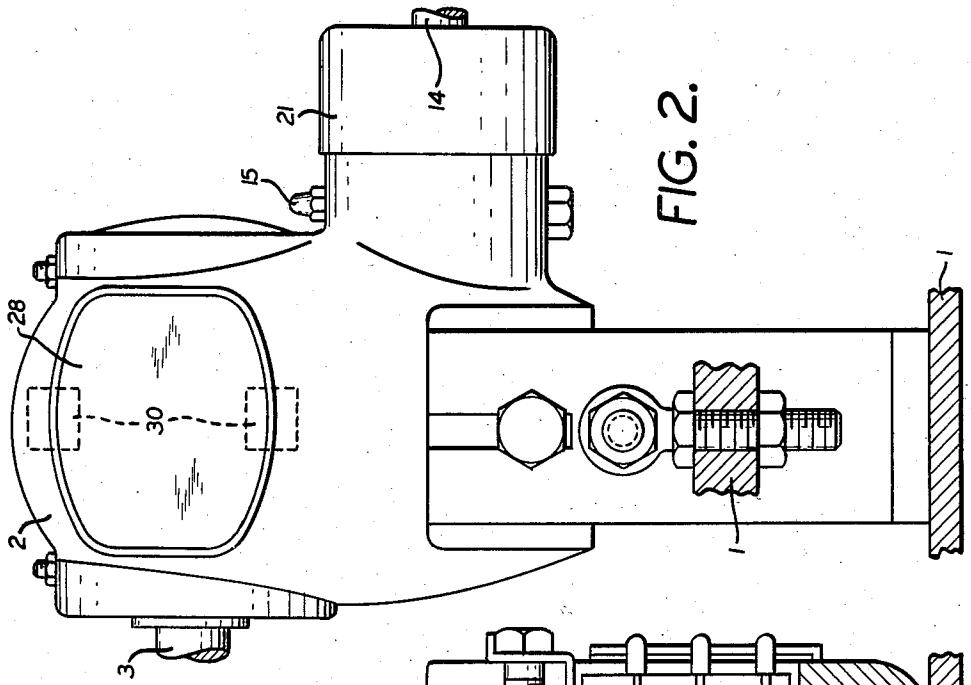


FIG. 2.

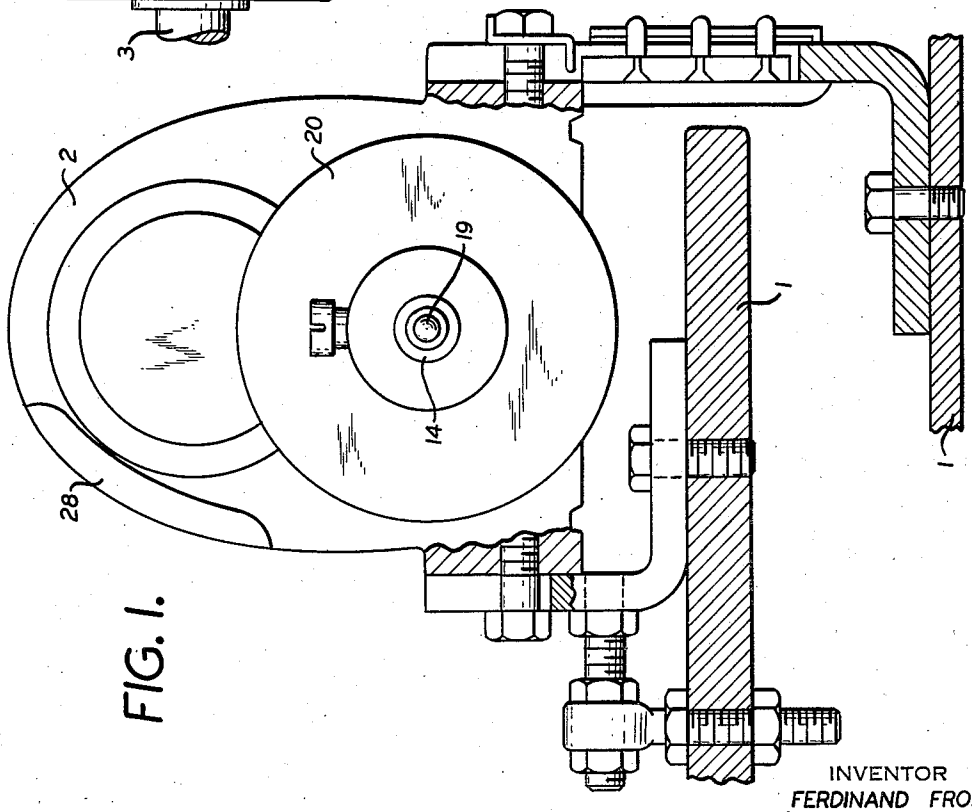


FIG. 1.

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FIG. 3.

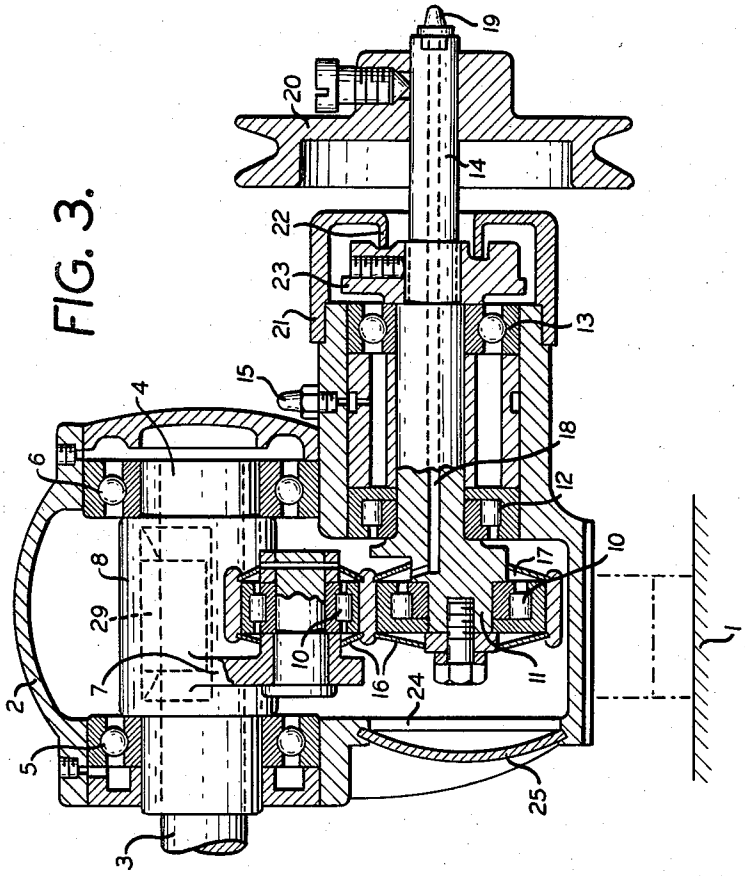
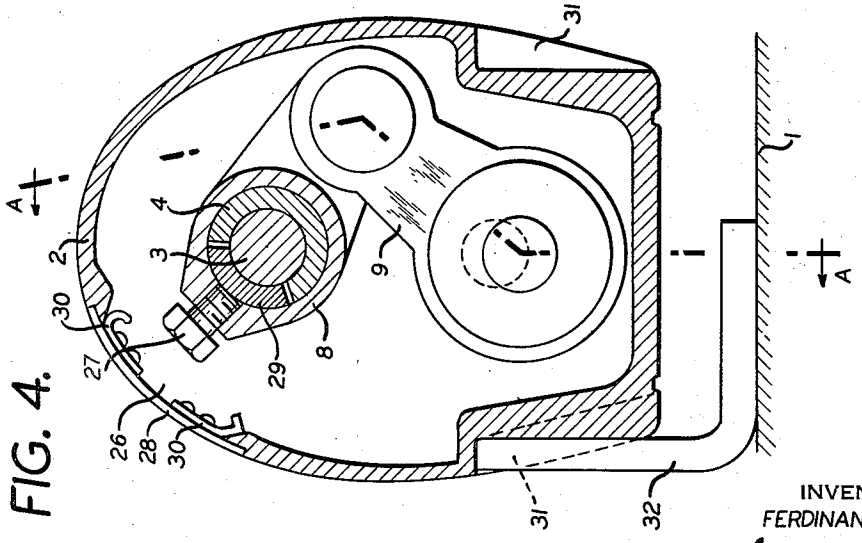


FIG. 4.



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DRIVE FOR COMBING BEAMS AND CARDS OF TEXTILE SPINNING MACHINES

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Application July 6, 1955, Serial No. 520,293
1 Claim. (Cl. 74—75)

This invention relates to a drive for combing beams and cards of textile spinning machines.

A general object of the invention is to provide a drive of the type referred to characterized by a simple, sturdy, one-piece housing which serves as an effective dependable support for both the combing beam and driving shaft and associated parts.

Spinning mill practice demands production machines with smooth surfaces and requiring least possible maintenance. This applies also to combing beam drives in which a crank arm serves as medium for converting the rotary motion of a driving shaft into the swinging motion of the combing beam. Further demands are narrow compact construction of the combing beam drive and that it can be most rigidly mounted. In addition, they must be simple and practical in construction and provided with means ensuring both easy and effective lubrication. In these respects the form of construction according to the present invention affords such marked advantages over the prior art that considerable improvement is assured.

According to the present invention the bearings for both the driving shaft and the combing beam are formed by a one-piece housing so that in comparison with the usual multipart constructions the advantages of greater rigidity as well as smaller, narrower and more smooth structure are afforded.

In addition, in the construction according to the invention the usual oil lubrication is dispensed with and in place thereof grease lubrication is provided. Thus is attained a combing beam drive which is more easily cleaned, because leakage of oil to the surface, to which the fly will tenaciously stick, is completely eliminated.

In order that the invention may be clearly understood and readily carried into practice, the same will now be described more fully with reference to the accompanying drawings, in which:

Fig. 1 is a front view of one practical construction of a combing beam drive in accordance with the present improvements,

Fig. 2 is a side view of the same,

Fig. 3 is a longitudinal sectional view on the line A—A of Fig. 4, and

Fig. 4 is a sectional view showing the clamping means for the combing beam connection.

The combing beam drive comprises mounting plates 1 on which is mounted a housing 2 in which the combing beam 3 is supported by means of a bushing 4 provided with a cutting at the surface and antifriction bearings 5 and 6. Connected to the arm 7 of the swing lever bushing 8 is the eccentric rod 9 which by means of antifriction bearings 10 is operatively connected with the eccentric 11 mounted on the free end of the driving shaft 14 supported in antifriction bearings 12 and 13. Grease nipple 15 serves for supplying the bearings 12, 13 with lubricating grease. Resilient sheet-metal covers 16 are parts of the walls confining the chamber 17. The latter communicates through a duct 18 in the driving shaft 14 with a grease nipple 19 located near the driving pulley

20 so that the grease in the chamber 17, which should always be filled, can readily be replenished at any time by means of a grease gun.

Cap 21 which engages with its annular extension 21 an annular groove 22 in the nut 23 serves for preventing dust from entering the housing 1, whose one opening 24 is closed by a resilient sheet-metal cover 25 and whose other opening 26, located in front of the housing, is closed by a cover 28 situated oppositely to the screw 27. The latter bears upon a pipe segment 29 which fits into said cutting of bushing 4 to thus—forming a clamp—clamp the pipe segment upon the combing beam 3. The cutting and the pipe segment are so dimensioned that the latter cannot drop into the bore of the bushing 4 when the combing beam is removed therefrom. Moreover, the cutting of bushing 4 and the pipe segment 29 are fitted with radially extending wedge surfaces in such a manner that there are small gaps between the bushing and the pipe segment. Springs 30 on the cover 28 serve for holding it in place on the housing 2.

As shown in Fig. 4 recesses 31 for receiving the legs of angular mounting supports 32 are provided on the housing 2. The upright legs of the mounting supports 32 thus carry the housing 2 with their upper ends so that the weight of both the combing beam and the combing beam drive rests directly on the mounting support; downward dislodgement of the housing is thus made impossible.

The drive is actuated by the driving sheave 20, causing rotation of the shaft 14 and the eccentric 11. The latter produces a reciprocating movement of the eccentric rod 9 and an oscillating movement of the combing beam 3 being operatively connected with the eccentric rod.

It is thought from the foregoing description that the advantages and novel features of the invention will be readily apparent.

It is to be understood that changes may be made in the construction and in the combination and arrangement of the several parts provided that such changes fall within the scope of the appended claim.

What I claim is:

A drive for combing beams and cards of the character described, comprising a one-piece housing provided with an annular clearance, a driving shaft extending from said annular clearance and a combing beam supported in anti-friction bearings within said housing, means for converting the rotary motion of said driving shaft into a swinging motion of said combing beam comprising an eccentric mounted at the free end of said driving shaft, a ring mounted on said eccentric extending into a rod operatively connected with the arm of a swing lever bushing associated with said combing beam and mounted on a further bushing between two antifriction bearings, a pipe segment being inserted into an appropriately dimensioned cutting in the surface of the bushing holding said swing lever and a screw clamping said pipe segment against said combing beam, said driving shaft having an externally accessible boring for lubricating said anti-friction bearings of said swing lever, and resilient sheet metal covers forming an enclosed chamber and enclosing said eccentric, said chamber communicating through said boring within said driving shaft with a lubricating nipple at the free end of said shaft.

References Cited in the file of this patent

UNITED STATES PATENTS

1,723,335	Dyess	Aug. 6, 1929
2,270,980	Tidball	Jan. 27, 1942
2,648,577	Watt	Aug. 11, 1953
2,653,354	Odom	Sept. 29, 1953