

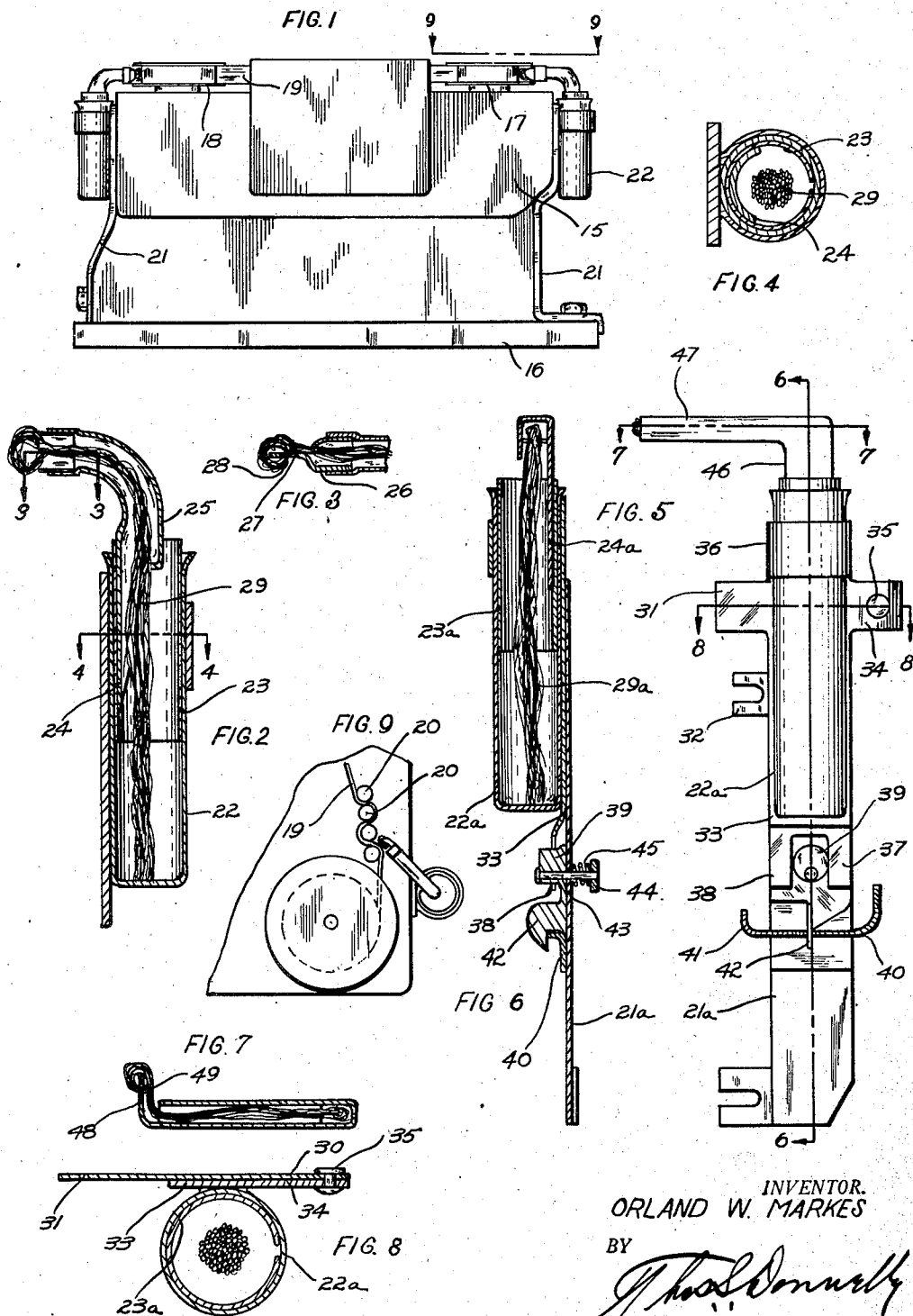
May 28, 1946.

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2,400,938

INKING DEVICE

Filed Dec. 16, 1944



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2,400,938

INKING DEVICE

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Application December 16, 1944, Serial No. 568,506

8 Claims. (Cl. 197-171)

My invention relates to a new and useful improvement in an ink applicator adapted for use on calculating machines and other types of machines in which a ribbon is used and against which type or other marking materials are pressed for producing the desired writing on paper, cardboard, or other material. In these types of machines, the ribbon is generally caused to travel while the writing machine is being operated. The ribbons commonly used are impregnated with ink in the manufacture of the ribbon and after the ribbon has been used a period of time, the impregnated ink becomes consumed and it is necessary then to replace the ribbon with a new one, even though the ribbon itself may not be worn out. The present invention provides a mechanism whereby the ink may be applied to the ribbon without removing it from the machine in which it is used so that it becomes possible during the entire life of the fabric of the ribbon to maintain the proper inking of the ribbon so that the impressions or writing obtained from the use of the ribbon in a writing or calculating machine will always be of uniform shade.

It is an object of the present invention to provide an ink applicator of this class which will be simple in structure, economical of manufacture, durable, compact and highly efficient in use.

Another object of the present invention is the provision of an ink applicator which may be easily and quickly swung into ink applying position and out of ink applying position.

Another object of the present invention is the provision of an ink applicator which may be easily moved to various positions transversely of the ribbon so that the application of the ink to the ribbon may be effected throughout the entire width of it.

Another object of the invention is the provision in a mechanism of this type of a wick-carrying member eccentrically mounted on a rotatable body.

Another object of the invention is the provision in an ink applicator of a wick-carrying member rockable transversely of its longitudinal axis.

Another object of the invention is the provision in an ink applicator of a mechanism for rocking the wick-supporting member transversely of its longitudinal axis.

Other objects will appear hereinafter.

It is recognized that various changes and modifications may be made in the detail of structure illustrated without departing from the invention itself and it is intended that such vari-

ations and modifications shall be encompassed within the scope of the claims which form a part hereof.

Forming a part of this specification is a drawing in which

Fig. 1 is a rear elevational view of a part of a writing machine showing the invention applied;

Fig. 2 is a longitudinal, vertical, central, sectional view of the invention;

Fig. 3 is a fragmentary, sectional view taken on line 3-3 of Fig. 2;

Fig. 4 is a sectional view taken on line 4-4 of Fig. 2;

Fig. 5 is a side elevational view of a slight modification of the invention;

Fig. 6 is a sectional view taken on line 6-6 of Fig. 5;

Fig. 7 is a sectional view taken on line 7-7 of Fig. 5;

Fig. 8 is a sectional view taken on line 8-8 of Fig. 5;

Fig. 9 is a fragmentary, top plan view taken on line 9-9 of Fig. 1.

In the drawing, I have illustrated the invention applied to a machine embodying as a part thereof a super-structure 15 positioned above a supporting base 16 and carrying the rotatable reels 17 and 18 on which is wound the ribbon 19. Presser rolls 20 are used to press against the ribbon 19, these presser rolls usually being provided for maintaining the desired tautness. The invention is intended as a means for applying ink to the ribbon 19 and comprises a supporting standard 21 which is mounted upon and projects above the base 16. Attached to the standard 21 is a reservoir 22 which serves as a container for the ink. Slidably mounted in this reservoir or container 22 is a tube 23. Mounted on the inner surface of the tube 23 is a plate 24 to which is attached, or which may be formed integral therewith, a tube 25 curved to provide a "goose" neck and on the end of which is attached the fitting 26. A plate 27 extends outwardly from this fitting and is provided with an opening 28. Passed through the tube 25 is a wick 29. This wick is brought over the end of the plate 27 and passed through the opening 28. This wick extends downwardly into the reservoir 22 so that it is submerged in the ink contained in the reservoir. As shown in Fig. 1, the reservoir 22 is mounted adjacent the path of travel of the ribbon 19.

After it is mounted in position and the reservoir 22 provided with a sufficient quantity of ink, the tube 23 may be moved longitudinally of the reservoir 22 until the applying end of the wick

is at the proper height. As shown in Fig. 4, this tube 23 is preferably formed from a split tube of resilient material so that it has sufficient resiliency to maintain itself in any position longitudinally of the reservoir 22 to which it may be moved. This tube 23 is also rotatable and by having the plate 24 mounted on one side of the tube 23, an eccentric mounting is provided so that the applying end of the wick may be quickly and easily moved out of engagement with the ribbon or into engagement therewith. The construction is such that the operator of the machine may apply the ink to the ribbon when necessary and by having the wick-carrying member movable longitudinally of the stationary reservoir, the wick may be moved transversely of the ribbon to cover any desired portion of it.

In Fig. 5, I have illustrated a modification of the invention in which a supporting standard 21a is used. This supporting standard has a laterally projecting arm 30 at one side thereof and a pair of laterally projecting arms 31 and 32 at the other side thereof in longitudinally spaced relation to each other. These laterally projecting arms 31 and 32 are provided merely to adapt the structure to a particular type of duplicating or writing machine. A supporting plate 33 is provided with a laterally extending arm 34 which is pivoted by means of the rivet 35 to the arm 30. This plate 33 is provided with a knuckle 36 which embraces a reservoir or ink container 22a so that the reservoir or ink container is thus mounted upon the plate 33. The lower end of the plate 33 is provided with a pair of spaced apart yoke arms 37 and 38 which embrace the cylindrical stud 39 which is eccentrically mounted rotatably on the standard 21a. Mounted on this standard 21a is a bar 40 having teeth 41 formed in its upper face. Overlying and engaging the upper face of the member 40 is a clip 42 which is attached to and serves as a means for rotating the stud 39. This stud 39 is pivoted on the pin 43 which carries the head 44. Bearing against this head 44 is one end of a spring 45, the other end of which bears against the rear face of the plate 21a. The construction is such that upon rocking the member 42 from one side to the other, the cam member 39 will be rotated so as to rock the reservoir-carrying plate 33. This causes a tilting of the container or reservoir 22a relative to its longitudinal axis.

Slidably mounted in the reservoir 22a is a split sleeve or tube 23a. Mounted on the inner face of the sleeve or tube 23a at one side thereof is a plate 24a which is formed into a tube 46 at its upper end, terminating in the angularly turned tubular portion 47 having the outwardly projecting, angularly turned lip 48 in which a passage 49 is formed. Passed through the tubes 46 and 47 is a wick 29a, the end of which is drawn through the opening 49 so as to cover the end of the lip 48. When the supporting member 21a is mounted in its proper position, similar to the mounting of the member 21 shown in Fig. 1, the tube 47 may be swung on the axis of the tube 23a into or out of engagement with the ribbon which it is desired to ink. This wick may also be moved upwardly and downwardly, relatively to the reservoir 22a which contains the ink, so that a movement of the applicator transversely of the ribbon may be effected.

Within certain limits, the applying end of the wick may also be moved upwardly and downwardly by a rotation of the cam 39. This would

cause the member 33 to be tilted so that the end of the tube 47 may be moved upwardly and downwardly within these limits. This would permit the inking of the ribbon at various points transversely of it, without necessitating a longitudinal movement of the tube 24a relatively to the reservoir 22a.

Experience has shown that an ink applicator constructed in this manner is most efficient and is productive of considerable saving in ribbon costs on duplicating machines of the type referred to, while it is easily and quickly installed.

What I claim as new is:

1. An inking device of the class described comprising a supporting member; a reservoir mounted on said supporting member; an open ended tube inserted in said reservoir and rotatable therein and slidable longitudinally thereof; a conducting tube mounted on said first mentioned tube and projecting upwardly therefrom and angularly thereto; and a wick extended through said conducting tube and into said reservoir.

2. An inking device of the class described comprising a supporting member; a reservoir mounted on said supporting member; an open ended tube inserted in said reservoir and rotatable therein and slidable longitudinally thereof; a conducting tube mounted on said first mentioned tube and projecting upwardly therefrom and angularly thereto; a wick extended through said conducting tube and into said reservoir; and means on said conducting tube for securing one end of said wick.

3. In an inking device of the class described, a supporting member; a reservoir mounted on said supporting member and adapted for reception of ink; a wick projected at one end into the ink in said reservoir; a conducting tube extending upwardly and angularly of said reservoir, said wick being projected through said projecting tube; and means for mounting said conducting tube eccentrically of said reservoir in rotatable relation to said reservoir and longitudinally slidable thereof.

4. In an inking device of the class described, a supporting member; a reservoir mounted on said supporting member and adapted for reception of ink; a wick projected at one end into the ink in said reservoir; a conducting tube extending upwardly and angularly of said reservoir, said wick being projected through said projecting tube; means for mounting said conducting tube eccentrically of said reservoir in rotatable relation to said reservoir and longitudinally slidable thereof; and attachment means on the end of said conducting tube for securing the outer end of said wick.

5. In an inking device of the class described, a supporting bracket; a reservoir for the reception of ink; means for mounting said reservoir on said bracket; means for tilting said reservoir relatively to said bracket on the mounting of said reservoir; and a wick retainer extending longitudinally from the upper end of said reservoir and tiltable in unison therewith.

6. An inking device of the class described, comprising: a supporting member; a reservoir mounted on said supporting member; a wick projecting at one end into said reservoir for emersion in ink contained therein and projecting at its opposite end outwardly from said reservoir; and a supporting member for the outer end of said wick angularly turned and projecting laterally outwardly of said reservoir and rotatable relatively thereto.

7. An inking device of the class described, comprising: a supporting member; a reservoir mounted on said supporting member; a tube inserted in and communicating with the interior of said reservoir and rotatable relatively thereto; a conducting tube mounted on said first mentioned tube and projecting upwardly therefrom and angularly thereto; and a wick extended through said conducting tube and into said reservoir.

8. An inking device of the class described, comprising: a supporting member; a reservoir

mounted on said supporting member; a tube inserted in and in communication with the interior of said reservoir and rotatable relatively thereto; a wick projecting into said reservoir at one end for emersion in ink contained therein and projecting at its opposite end outwardly from said reservoir; and a rigid supporting member carried by said tube and projecting outwardly from said reservoir and angularly turned relatively to said tube for supporting the outer end of said wick.

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