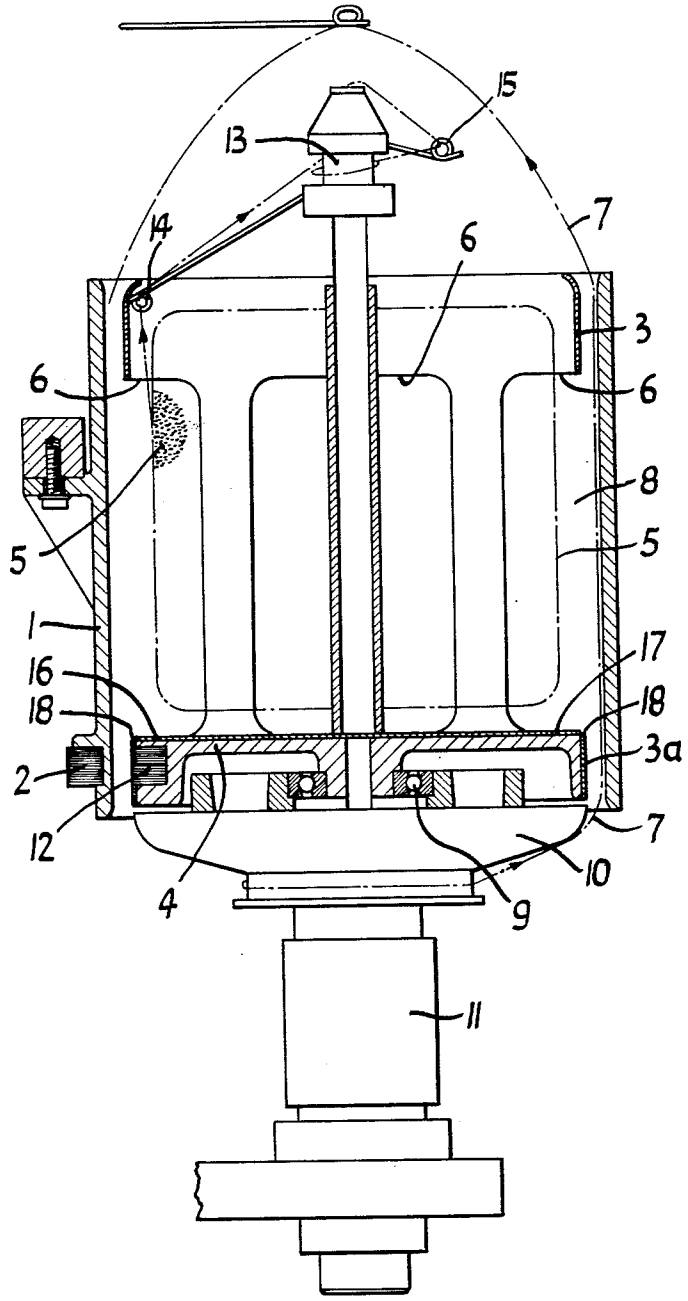
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SPOOL HEAD FOR DOUBLE TWISTING MACHINES

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SPOOL HEAD FOR DOUBLE TWISTING MACHINES

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This invention relates to a spool head for double twisting machines, in which large openings are provided in the housing of the head, and the magnets that serve to arrest the spool head are arranged beneath the spool. In known constructions of such spool heads the magnets in the head are mounted openly beneath the spool so that corners, recesses and edges are present on which the fluff that falls can lodge. With the accumulation of this fluff it can ultimately project into the path of the thread that is running off or rotating, so that this fluff becomes twisted into balls with the thread running off, so that waste results.

In order to overcome this disadvantage, the housing of the spool head has been provided with openings to enable the stream of air through the wound thread to remove the fluff continuously from the head. In known constructions of head, however, the provision of these openings does not effectively prevent the settling of fluff on the base, so that it has hitherto been necessary to remove the spool head periodically and to clean the base and the corners of the magnets by hand.

In order to overcome the above mentioned disadvantages, in accordance with the invention there is provided a spool head the base portion of which has an upper surface which is flat and smooth. With this new flat contour of the base of the head the fluff cannot lodge on corners or the like and fluff that falls down onto this smooth surface is continuously removed towards the exterior through the openings in the housing of the head by the air stream resulting from the ball of thread, so that the formation of little balls of fluff in the yarn cannot occur.

An embodiment of the invention will now be described with reference to the accompanying drawing, which shows in vertical section a spool head of a double twisting machine.

Referring to the drawing, reference numeral **1** indicates a stationary cylinder that carries a magnet **2**. This cylinder surrounds a spool head consisting of a cylindrical housing **3** and a base portion **4**, in which head the spool **5** is mounted. As can be seen from the drawing, in the housing **3** there are provided large window-like openings **6**, so that the spool **5** stands free and the air stream produced by the "balloon" **7** of thread in the space **8** can remove fluff to the exterior.

As can be seen from the drawing, the base portion **4** of the spool head is rotatably mounted via a ballbearing **9** on a disc **10** on a rotary spindle **11**. The spool head is arrested by the magnet **2** and the coacting magnets **12** arranged in the base portion **4** of the head so that only the spindle rotates and the thread brake indicated at **13**, with which the thread guides **14** and **15** that remove the threads from the stationary spool **5** rotate.

In accordance with the invention the upper side of the base portion **4** has a flat smooth surface **16**. For this purpose the base portion **4** may be smoothly turned or polished. In order to avoid this additional treatment a metal disc **17** with a smooth surface may if desired be arranged on the base portion **4**.

In order that the air stream resulting from the "balloon" of threads may entrain and carry away fluff falling on the smooth level surface **16**, the surface **16** of

the base is arranged at the same level as the lower edge **18** of the openings **6**, or preferably somewhat above this edge as shown. This arrangement prevents the fluff from adhering to the housing of the head.

As can further be seen from the drawing, in the embodiment illustrated the spool head consists essentially of two parts, namely the cylindrical housing **3**, **3***a* and the base portion **4** which has a cylindrical peripheral surface, onto which the lower part **3***a* of the housing is pushed or fixed.

Further, in the embodiment illustrated the magnet **12** located in the spool head is arranged beneath the flat surface **16** of the base **4**, being embedded in the base portion **4**. This provides a construction of the spool head, and in particular of the base portion **4**, on which no fluff can lodge by reason of the flat smooth surface **16** and the cylindrical periphery of the base portion **4**.

I claim:

1. A spool support for a strand twisting machine, comprising:
   - a rotatable spindle;
   - a spool head supported on said spindle, said spool head comprising an upright substantially cylindrical cover portion for surrounding the spool and a transversely extending base portion, said cover portion having a plurality of circumferentially spaced, large, elongated openings therethrough and extending from adjacent the upper end thereof to adjacent the lower end thereof, said base portion having a smooth upper surface extending substantially to the lower ends of the openings in said cover portion, said base portion also having a first magnet mounted therein beneath said smooth upper surface;
   - a stationary cylinder surrounding said spool head, said cylinder being open at both its upper and its lower ends and being spaced outwardly from the cover portion so that a thread can pass through the space therebetween;
   - and a second magnet mounted in said stationary cylinder and arranged for coaction with said first magnet to hold the spool head in a stationary position, whereby any fluff falling onto said upper surface will be moved outwardly through said openings and will be carried away by the air stream produced by movement of the thread through the space.

2. A spool support according to claim 1, in which the base portion has a cylindrical peripheral surface in which the first magnet is mounted, the lower end of said cylindrical cover portion being snugly sleeved over said peripheral surface of said base portion.

3. A spool support according to claim 1, in which a smooth-surfaced metal plate is affixed to the upper side of the base portion to form said smooth upper surface.

4. A spool support according to claim 2, in which a smooth-surfaced metal plate is affixed to the upper side of the base portion to form said smooth upper surface.

5. A spool support for a strand twisting machine, comprising:
   - a rotatable spindle having a disc mounted thereon;
   - means on said disc supporting a bearing;
   - a base portion having a depending central boss mounted in said bearing and having a depending peripheral flange extending close to said disc adjacent the periphery thereof, said flange having a first magnet mounted in a recess in the peripheral surface thereof, said base portion having a smooth and flat upper surface;
   - a substantially cylindrical cover portion extending upwardly from said base portion and having its lower end snugly sleeved on said peripheral surface of said flange, said cover portion having a plurality

of circumferentially spaced, substantially rectangular, large openings therethrough with the lower edges of said openings being no higher than said upper surface of said base portion;

a stationary cylinder extending from adjacent said disc to adjacent the upper end of said cover portion, said cylinder being open at both its upper and its lower ends and surrounding and being spaced from said flange and said cover portion so that a thread can pass through the space therebetween; and

a second magnet mounted on said cylinder for cooperation with said first magnet to hold said base portion and said cover portion against rotation.

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