I claim:

1. A milling assembly for subterranean use to mill and retrieve an object being milled, comprising:

a mill body having a lower end with a cutting structure thereon;

a retrieval assembly extending beyond said lower end for engaging the object for retrieval after it is milled loose;

at least one debris inlet in said lower end to remove debris from said cutting structure into said mill body with flow coming down outside said body and entering said inlet.

2. The assembly of claim **1**, wherein:

said retrieval assembly defines an annular inlet into said mill body.

3. The assembly of claim **2**, wherein:

said cutting structure comprises a plurality of radially extending blades extending across said annular inlet.

4. The assembly of claim **3**, wherein:

said annular inlet at said lower end of said body is formed between pairs of blades that are circumferentially spaced about said retrieval assembly.

5. The assembly of claim **4**, wherein:

the open area of said annular inlet increases above said blades.

6. The assembly of claim **5**, wherein:

said body comprises a support tube connected to an upper end of said body which forms an annular passage around said retrieval assembly for debris coming into said annular inlet.

7. The assembly of claim **6**, wherein:

said annular passage within said support tube becomes circular after passing through an opening in said retrieval assembly.

8. The assembly of claim **7**, wherein:

said retrieval assembly extends beyond said support tube so that the flow path continues circular in said retrieval assembly.

9. The assembly of claim **8**, wherein:

said retrieval assembly with said circular internal flow passage is connected to an inlet at a lower end of a debris removal device.

10. The assembly of claim **7**, wherein:

the diameter of said circular configured flow path ranges from 3 to 15 inches for a tubular size of 3.5 to 16 inches outside diameter in the tubular portion of said retrieval assembly defining said circular flow passage therein.

11. The assembly of claim **1**, wherein:

said debris is directed from said debris inlet to a debris removal device.

12. The assembly of claim **11**, wherein:

said debris removal device comprises at least one eductor to reduce pressure and induce debris laden flow into said inlet on said mill body.

13. The assembly of claim **1**, wherein:

said mill body has a tubular extension into which said retrieval assembly extends to define an annular flow path that leads into a debris removal device.

14. The assembly of claim **13**, wherein:

said retrieval assembly extends beyond said tubular extension in tubular form and has an opening into said annular flow path such that the flow path transitions into a circular shape between said opening and the debris removal device.

15. The assembly of claim **14**, wherein:

said retrieval assembly is an elongated solid shape from said mill body to said opening where it transitions to said tubular shape.

16. The assembly of claim **14**, wherein:

said retrieval assembly is an elongated hollow shape with an inlet below said mill body and an open top at said transition that comprises said opening.

17. The assembly of claim **3**, wherein:

said blades are welded to a hub in said mill body through which said retrieval assembly is supported.

I claim:

1. 1. A milling assembly for subterranean use to mill and retrieve an object being milled, comprising:

a mill body having a lower end with a cutting structure thereon;

a retrieval assembly extending beyond said lower end for engaging the object for retrieval after it is milled loose;

at least one debris inlet in said lower end to remove debris from said cutting structure into said mill body with flow coming down outside said body and entering said inlet.

2. The assembly of claim 1, wherein: said retrieval assembly defines an annular inlet into said mill body.

3. The assembly of claim 2, wherein: said cutting structure comprises a plurality of radially extending blades extending across said annular inlet.

4. The assembly of claim 3, wherein: said annular inlet at said lower end of said body is formed between pairs of blades that are circumferentially spaced about said retrieval assembly.

5. The assembly of claim 4, wherein: the open area of said annular inlet increases above said blades.

6. The assembly of claim 5, wherein:

said body comprises a support tube connected to an upper end of said body which forms an annular passage around said retrieval assembly for debris coming into said annular inlet.

7. The assembly of claim 6, wherein:

said annular passage within said support tube becomes circular after passing through an opening in said retrieval assembly.

8. The assembly of claim 7, wherein:

said retrieval assembly extends beyond said support tube so that the flow path continues circular in said retrieval assembly.

9. The assembly of claim 8, wherein:

said retrieval assembly with said circular internal flow passage is connected to an inlet at a lower end of a debris removal device.

10. The assembly of claim 7, wherein:

the diameter of said circular configured flow path ranges from 3 to 15 inches for a tubular size of 3.5 to 16 inches outside diameter in the tubular portion of said retrieval assembly defining said circular flow passage therein.

11. The assembly of claim 3, wherein:

said blades are welded to a hub in said mill body through which said retrieval assembly is supported.

12. The assembly of claim 1, wherein:

said debris is directed from said debris inlet to a debris removal device.

13. The assembly of claim 12, wherein:

said debris removal device comprises at least one eductor to reduce pressure and induce debris laden flow into said inlet on said mill body.

14. The assembly of claim 1, wherein:

said mill body has a tubular extension into which said retrieval assembly extends to define an annular flow path that leads into a debris removal device.

15. The assembly of claim 14, wherein:

said retrieval assembly extends beyond said tubular extension in tubular form and has an opening into said annular flow path such that the flow path transitions into a circular shape between said opening and the debris removal device.

16. The assembly of claim 15, wherein:

said retrieval assembly is an elongated solid shape from said mill body to said opening where it transitions to said tubular shape.

17. The assembly of claim 15, wherein:

said retrieval assembly is an elongated hollow shape with an inlet below said mill body and an open top at said transition that comprises said opening..