What is claimed is:

1. A pipe coupling for joining pipe elements in end to end relation, said pipe coupling comprising:

a plurality of coupling segments joined end to end surrounding a central axis and defining a central space for receiving said pipe elements, at least one of said coupling segments comprising:

a pair of projections positioned in spaced apart relation on opposite sides of said one coupling segment and extending toward said central axis, at least a portion of each of said projections being engageable with a respective one of said pipe elements, each of said projections having an arcuate surface facing said central axis,

wherein at least one of said projections comprises first and second outwardly facing surface portions, said first surface portion being angularly oriented relatively to said second surface portion, said first surface portion subtending an angle of about 35° to about 60° measured with respect to said central axis.

2. The pipe coupling according to claim 1, wherein said first surface portion is centered on a line extending from said central axis and oriented from an angle of about 30° to about 50° measured from a first line extending between a first end of said one coupling segment and a second end of said one coupling segment.

3. The pipe coupling according to claim 1, wherein said first surface portion has an orientation angle relative to said second surface portion from about 15° to about 60°.

4. The pipe coupling according to claim 2, wherein said at least one projection further comprises a third outwardly facing surface portion, said third surface portion being angularly oriented relatively to said second surface portion, said third surface portion subtending an angle along said projection of about 35° to about 60° measured with respect to said central axis, said second surface portion being positioned between said first and third surface portions.

5. The pipe coupling according to claim 4, wherein said third surface portion is centered on a line extending from said central axis and oriented from an angle of about 30° to about 50° measured from said first line.

6. The pipe coupling according to claim 4, wherein said third surface portion has an orientation angle relative to said second surface portion from about 15° to about 60°.

7. The pipe coupling according to claim 1, comprising only a first and a second of said segments joined end to end surrounding said central axis, said coupling further comprising a ring gasket positioned between said first and second segments, said ring gasket supporting said first and second segments in spaced apart relation sufficient to insert said pipe elements between said coupling segments.

8. The pipe coupling according to claim 7, wherein said first and second segments comprise sidewalls from which said projections extend and a back wall extending between said projections, said sidewalls being attached to said back wall, said sidewalls and said back wall together defining a pocket, said pocket being adapted to receive said ring gasket.

9. The pipe coupling according to claim 1, further comprising at least one notch positioned in at least one of said projections of each said segment, each said notch located at an end of one of said segments.

10. The pipe coupling according to claim 9, wherein said at least one notch comprises first and second notches positioned on opposite ends of said one segment.

11. A pipe coupling for joining pipe elements in end to end relation, said pipe coupling comprising:

first and second coupling segments joined end to end surrounding a central axis and defining a central space for receiving said pipe elements, each one of said coupling segments comprising:

first and second projections, each positioned in spaced apart relation on opposite sides of said coupling segments and extending toward said central axis, at least a portion of each of said projections being engageable with a respective one of said pipe elements, each of said projections having an arcuate surface facing said central axis,

wherein each of said projections comprises first and second outwardly facing surface portions, and wherein, for each of said projections, said first surface portion is angularly oriented relatively to said second surface portion, and wherein, for each of said projections, said first surface portion subtends an angle of about 35° to about 60° measured with respect to said central axis.

12. The pipe coupling according to claim 11, wherein, for each of said projections on each of said coupling segments, said first surface portion is centered on a line extending

from said central axis and oriented from an angle of about 30° to about 50° measured from a first line extending between a first end of said second coupling segment and a second end of said second coupling segment.

13. The pipe coupling according to claim 12, wherein, for each of said projections on each of said coupling segments, said first surface portion has an orientation angle relative to said second surface portion from about 15° to about 60°.

14. The pipe coupling according to claim 12, wherein each of said projections further comprises a third outwardly facing surface portion, wherein, for each of said projections, said third surface portion is angularly oriented relatively to said second surface portion, wherein, for each of said projections, said third surface portion subtends an angle along said projection of about 35° to about 60° measured with respect to said central axis, and wherein, for each of said projections, said second surface portion is positioned between said first and third surface portions.

15. The pipe coupling according to claim 14, wherein, for each of said projections on each of said coupling segments, said third surface portion is centered on a line extending from said central axis and oriented from an angle of about 30° to about 50° measured from said first line.

16. The pipe coupling according to claim 14, wherein, for each of said projections on each of said coupling segments, said third surface portion has an orientation angle relative to said second surface portion from about 15° to about 60°.

17. The pipe coupling according to claim 11, further comprising a ring gasket positioned between said first and second coupling segments, said ring gasket supporting said first and second segments in spaced apart relation sufficient to insert said pipe elements between said coupling segments.

18. The pipe coupling according to claim 17, wherein each of said coupling segments comprises sidewalls from which said projections extend and a back wall extending between said projections, and wherein, for each of said coupling segments, said sidewalls are attached to said back wall, said sidewalls and said back wall together define a pocket, and said pocket is adapted to receive said ring gasket.

19. The pipe coupling according to claim 11, wherein, each of said projections on each of said coupling segments further comprises at least one notch positioned in said projection, each said notch located at an end of one of said coupling segments.

20. The pipe coupling according to claim 19, wherein, for each of said projections on each of said coupling segments, said at least one notch comprises first and second notches positioned on opposite ends of said one segment.

21. A pipe coupling segment, used in a coupling for joining pipe elements in end to end relation, said coupling comprising a plurality of said segments joined end to end surrounding a central axis and defining a central space for receiving said pipe elements, said segment comprising:

a pair of projections positioned in spaced apart relation on opposite sides of said coupling segment and extending toward said central axis, at least a portion of each of said projections being engageable with a respective one of said pipe elements, each of said projections having an arcuate surface facing said central axis,

wherein at least one of said projections comprises first and second outwardly facing surface portions, and wherein, for said at least one projection, said first surface portion is angularly oriented relatively to said second surface portion, and wherein, for said at least one projection, said first surface portion subtends an angle of about 35° to about 60° measured with respect to said central axis.

22. The pipe coupling segment according to claim 21, wherein said first surface portion is centered on a line extending from said central axis and oriented from an angle of about 30° to about 50° measured from a first line extending between a first end of said coupling segment and a second end of said coupling segment.

23. The pipe coupling segment according to claim 22, wherein said first surface portion has an orientation angle relative to said second surface portion from about 15° to about 60°.

24. The pipe coupling segment according to claim 22, wherein said at least one projection further comprises a third outwardly facing surface portion, said third surface portion being angularly oriented relatively to said second surface portion, said third surface portion subtending an angle of about 35° to about 60° measured with respect to

said central axis, said second surface portion being positioned between said first and third surface portions.

25. The pipe coupling segment according to claim 24, wherein said third surface portion is centered on a line extending from said central axis and oriented from an angle of about 30° to about 50° measured from said first line.

26. The pipe coupling segment according to claim 24, wherein said third surface portion has an orientation angle relative to said second surface portion from about 15° to about 60°.

27. A method for coupling first and second pipe elements in end to end relation, said method comprising:

using a pipe coupling having first and second coupling segments attached to one another end to end surrounding a central axis and defining a central space, said coupling segments being supported in spaced apart relation on an elastic ring gasket, said coupling segments having adjustable connection members at each end for drawing said coupling segments toward said central space when said connection members are tightened, at least one of said coupling segments comprising:

a pair of projections positioned in spaced apart relation on opposite sides of said one coupling segment and extending toward said central axis, at least a portion of each of said projections being engageable with a respective one of said pipe elements, each of said projections having an arcuate surface facing said central axis,

wherein at least one of said projections comprises first and second outwardly facing surface portions, said first surface portion being angularly oriented relatively to said second surface portion, said first surface portion subtending an angle of about 35° to about 60° measured with respect to said central axis;

inserting said first pipe element into said central space from one side of said pipe coupling, said first pipe element engaging and thereby rotating said coupling segments relatively to one another about an axis passing through said connection members to provide clearance for inserting said first pipe element;

inserting said second pipe element into said central space from an opposite side of said pipe coupling; and

tightening said connection members and thereby drawing said coupling segments toward one another and into engagement with said first and second pipe elements to couple them in end to end relation.

28. The method according to claim 27, wherein said step of inserting said second pipe element into said central space from an opposite side of said pipe coupling comprises engaging said coupling segments with said second pipe element and thereby rotating said coupling segments relatively to one another about said axis passing through said connection members to provide clearance for inserting said second pipe element.

What is claimed is:

1. A method for coupling first and second pipe elements in end to end relation, said method comprising:

using a pipe coupling having first and second coupling segments attached to one another end to end surrounding a central axis and defining a central space, said coupling segments being supported in spaced apart relation on an elastic ring gasket, said coupling segments having adjustable connection members at each end for drawing said coupling segments toward said central space when said connection members are tightened, at least one of said coupling segments comprising:

a pair of projections positioned in spaced apart relation on opposite sides of said one coupling segment and extending toward said central axis, at least a portion of each of said projections being engageable with a respective one of said pipe elements, each of said projections having an arcuate surface facing said central axis,

wherein at least a first of said projections comprises first and second outwardly facing surface portions, said first surface portion being angularly oriented relatively to said second surface portion, said first surface portion subtending an angle of about 35° to about 60° measured with respect to said central axis;

inserting said first pipe element into said central space from one side of said pipe coupling, said first pipe element contacting said first surface portion of said first projection of said one coupling segment thereby rotating said coupling segments relatively to one another about an axis passing through said connection members to provide clearance for inserting said first pipe element and engaging said first pipe element with said coupling segments;

inserting said second pipe element into said central space from an opposite side of said pipe coupling; and

tightening said connection members and thereby drawing said coupling segments toward one another and into engagement with said first and second pipe elements to couple them in end to end relation.

2. The method according to claim 1, wherein a second of said projections of said one coupling segment comprises first and second outwardly facing surface portions, wherein said

step of inserting said second pipe element into said central space from an opposite side of said pipe coupling comprises engaging said coupling segments with said second pipe element contacting said first surface portion of said second projection of said one coupling segment thereby rotating said coupling segments relatively to one another about said axis passing through said connection members to provide clearance for inserting said second pipe element and engaging said second pipe element with said coupling segments.

3. The method according to claim 1, wherein said first outwardly facing surface portion is centered on a line extending from said central axis and oriented from an angle of about 30° to about 50° measured from a first line extending between a first end of said one coupling segment and a second end of said one coupling segment.

4. The method according to claim 1, wherein said first outwardly facing surface portion has an orientation angle relative to said second outwardly facing surface portion from about 15° to about 60°.

5. The method according to claim 3, wherein said at least one projection further comprises a third outwardly facing surface portion, said third outwardly facing surface portion being angularly oriented relatively to said second outwardly facing surface portion, said third outwardly facing surface portion subtending an angle along said projection of about 35° to about 60° measured with respect to said central axis, said second outwardly facing surface portion being positioned between said first and third outwardly facing surface portions.

6. The method according to claim 5, wherein said third outwardly facing surface portion is centered on a line extending from said central axis and oriented from an angle of about 30° to about 50° measured from said first line.

7. The method according to claim 5, wherein said third outwardly facing surface portion has an orientation angle relative to said second outwardly facing surface portion from about 15° to about 60°.

8. The method according to claim 1, wherein said first and second segments comprise sidewalls from which said projections extend and a back wall extending between said projections, said sidewalls being attached to said back wall, said sidewalls and said back wall together defining a pocket, said pocket being adapted to receive said elastic ring gasket.

9. The method according to claim 1, wherein said pipe coupling further comprises at least one notch positioned in at least one of said projections of each said segment, each said notch located at an end of one of said segments.

10. The method according to claim 9, wherein said at least one notch comprises first and second notches positioned on opposite ends of said one segment.

11. The method according to claim 1, wherein said step of inserting said first pipe element into said central space does not comprise disassembling the pipe coupling.

12. The method according to claim 2, wherein said step of inserting said second pipe element into said central space does not comprise disassembling the pipe coupling.

13. The method according to claim 2, wherein, prior to insertion of said first and second pipe elements into said central space, said first and second segments are positioned in their original relative angular positions, and wherein, following insertion of said first and second pipe elements into said central space and tightening of said connection members, said elastic ring gasket is elastically biased to restore said first and second segments toward their original relative angular positions.

14. The method according to claim 1, wherein said first and second pipe elements have respective flared ends.

15. The method according to claim 14, wherein said flared ends of said first and second pipe elements define respective circumferential grooves, and wherein said step of tightening said connection members comprises effecting engagement between said projections of each said coupling segment and a corresponding circumferential groove of said first and second pipe elements.

16. The method according to claim 1, wherein, prior to insertion of said first and second pipe elements into said central space, said first and second pipe elements are not axially aligned with said central axis of said pipe coupling.

17. The method according to claim 1, wherein said pipe coupling is a rigid pipe coupling.

18. The method according to claim 17, wherein each of said first and second coupling segments has respective interfacing surfaces, wherein said interfacing surfaces of each of said coupling segments have opposite angular orientations with respect to one another, and wherein,

when said connection members are tightened, said interfacing surfaces of said first coupling segment contact counterpart interfacing surfaces of said second coupling segment and said first and second coupling segments are forced to rotate about a vertical axis in opposite directions relatively to one another.

19. The method according to claim 1, wherein said pipe coupling is a flexible pipe coupling.