WHAT IS CLAIMED IS:

1. A self cooling and self dispensing beverage keg comprising:

(A) a beverage chamber having a capacity of several liters of beverage including a sidewall and upper and lower walls enclosing said chamber;

(B) a heat exchange unit coupled to said upper wall and suspended within said beverage chamber to be substantially surrounded by beverage in said beverage chamber but not in contact with said walls;

(C) said heat exchange unit comprising:

(1) a pressure tight sealed stainless steel metal housing having a top and a bottom;

(2) a plurality of discrete compacted solid carbon sections each defining an opening therethrough disposed within said housing;

(3) a metal tube received within each of said openings in said compacted solid carbon sections and sealed to said top and bottom of said stainless steel metal housing;

(D) means including a plurality of metal gassing tubes for injecting carbon dioxide gas under pressure into said housing to be adsorbed by said compacted solid carbon sections;

(E) means for releasing said carbon dioxide gas under pressure from said housing for cooling beverage contained within said chamber; and

(F) means for dispensing beverage from said chamber including a separate canister containing a compacted carbon slug for adsorbing carbon dioxide gas under pressure, a regulator valve affixed to said canister for releasing carbon dioxide gas into said chamber to maintain a pressure head within said chamber sufficient to dispense the beverage from said chamber.

~~2. The self cooling and self dispensing beverage keg as defined in claim 1 wherein said metal housing of said heat exchange unit and said metal tubes are affixed to the top and bottom of said housing.~~

~~3. The self cooling and self dispensing beverage keg as defined in claim 2 wherein said metal housing and said metal tubes are constructed of stainless steel.~~

~~4~~2. The self cooling and self dispensing keg as defined in claim ~~2~~ 1 wherein said ~~means for injecting a gas under pressure includes a~~ plurality of metal gassing tubes ~~having~~ each have first and second ends with said first end being affixed to said top of said heat exchange unit housing and a valve affixed to said second end thereof.

~~5. The self cooling and self dispensing beverage keg described in claim 4 wherein said metal housing, said metal tubes and said metal gassing tubes are constructed of stainless steel.~~

~~6~~3. The self cooling and self dispensing beverage keg as defined in claim ~~4~~ 2 wherein said first end of each of said gassing tubes is positioned to be at an intersection of two discrete compacted solid carbon sections.

~~7~~4. The self cooling and self dispensing beverage keg as defined in claim ~~4~~ 2 which further includes an adaptor secured to said second end of each said gassing tube, each said gassing tube being welded to said upper wall of said beverage chamber to suspend said heat exchange unit within said chamber and said adaptor being welded to said second end of said gassing tube.

~~8. The self cooling and self dispending beverage keg as defined in claim 1 which further includes a separate canister containing a carbon slug for adsorbing carbon dioxide gas under pressure, a regulator valve affixed to said canister for releasing carbon dioxide gas into said chamber to maintain a pressure within said chamber sufficient to dispense the beverage from said chamber.~~

~~9~~5. The self cooling and self dispensing beverage keg as defined in Claim ~~8~~ 1 which includes a plurality of separate canisters.

~~10~~6. The self cooling and self dispensing beverage keg as defined in Claim ~~9~~ 5 wherein said plurality of canisters are disposed within said keg but outside said heat exchange unit.

~~11~~7. The self cooling and self dispensing beverage keg as defined in Claim ~~10~~ 6 wherein said plurality of canisters are suspended beneath said heat exchange unit and are surrounded by the beverage in said keg.