Diminished Surface Contact Infrastructure

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Purpose of Invention:

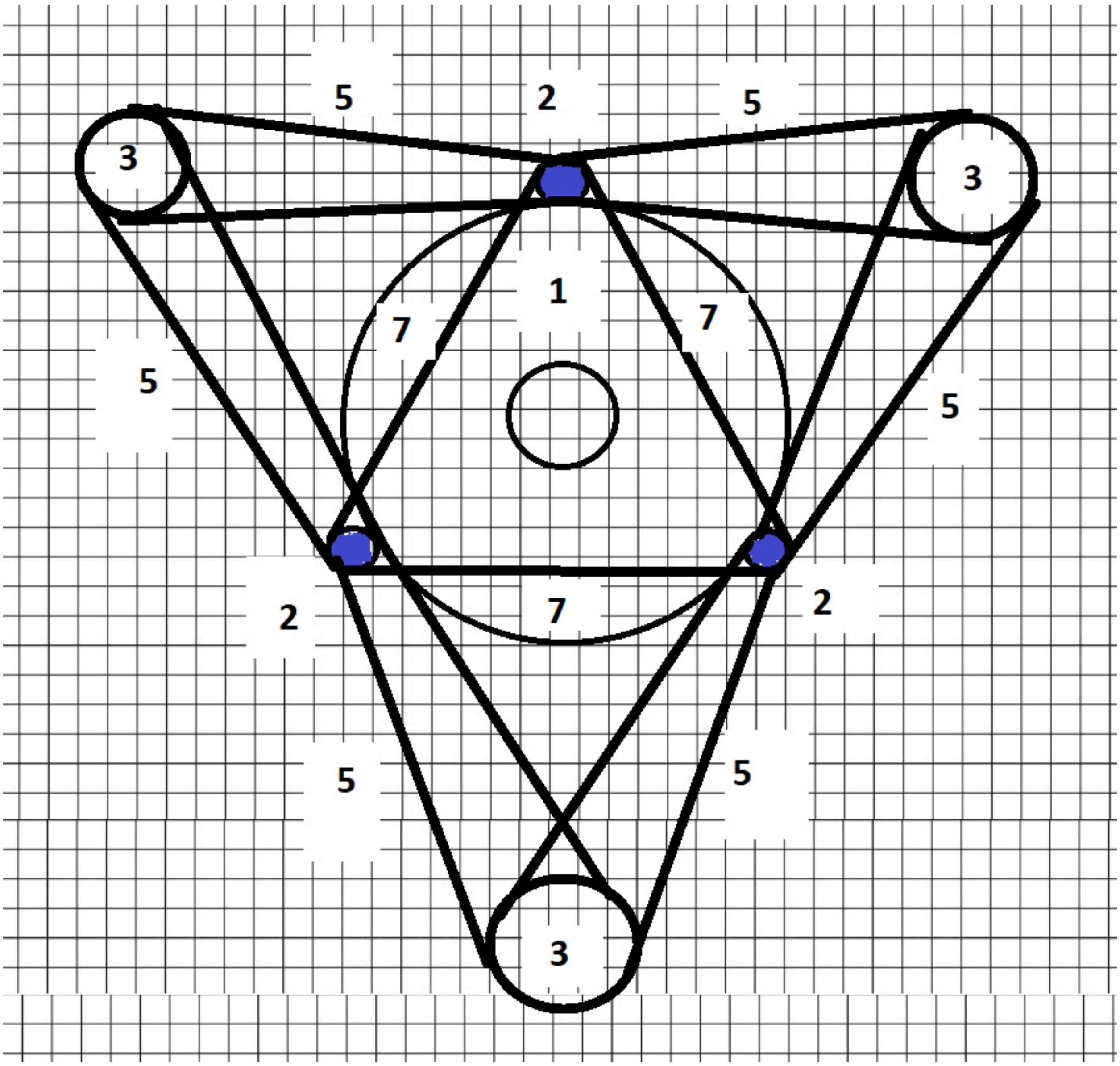
Provide design for physical infrastructure that is resistant to earth quakes. We know traditional buildings distribute the weight on multiple support beams. We know that if the surface of the earth is relatively flat, it can often be observed when after the earth quake happens, it send shock waves to the physical surface, thus causing at least one support beam to potentially go up while the others may not. This alone could severely cause a building to lose its structural integrity. As load is not evenly able to be distributed as it was before since one support beam is no longer at its original approved state.

Given the various tolerance of weight distribution, after losing a support beam or how bad its position has changed, it would dictate how recoverable the infrastructure is.

To solve this, if we distribute all weight onto a single point for diminished surface contact and provide flexible computer cabling that can readjust their lengths to keep the building perfectly perpendicular to the ground. This keeps the surface from experiencing any shakes or cause unsafe conditions within the infrastructure and always be able to distribute its weight to match the right up pull of the force of gravity.

Invention Visuals:

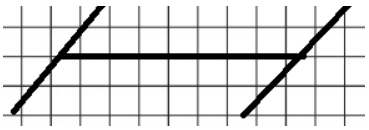
Top:

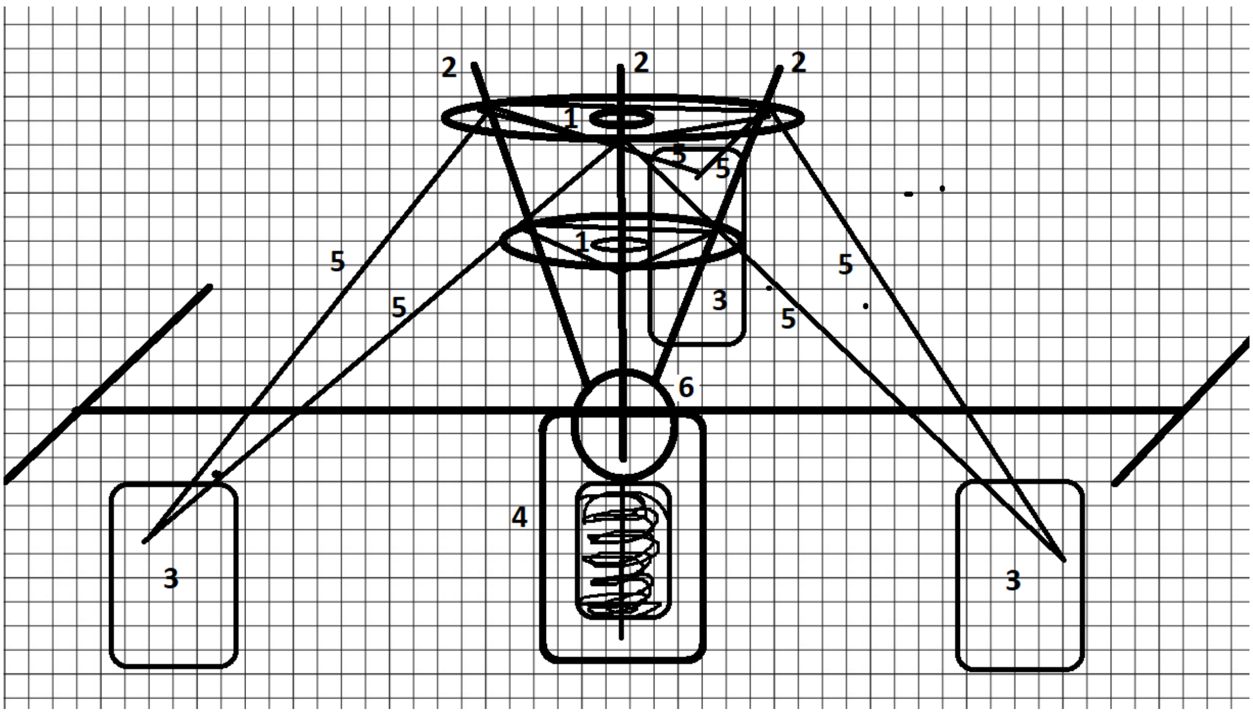


Side:

Note:

This in diagram is depiction of three-dimensional ground view. The horizontal line represents surface of ground.





Components:

1. Support Disks (#1 in the diagram)
    a. "CD-ROM like" disks that sits within (inside) the bendable straight beams (#2 in the diagram)
    b. Each #1 Depicted at the top (where the **load** can be placed. (Load can be a residential house, or business structure).
    c. Depicted in the middle again as well below the top one.
2. Bendable Straight beams (#2 in the diagram)
    a. There are three bendable straight beams in this diagram (each depicted with number #2).
    b. These are along the outside of the two support disks (#1) in the diagram. They meet at the bottom central point ball (#6).
    c. This provides the single point for diminished surface contact and distributes weight onto the single point, the central point ball (#6).
    d. Each support beam (#2), is being pulled by cabling (#5 and #7)
3. Computerized Stake-Like Cable Anchors (#3 in the diagram)

    a. This “stakes” penetrate the ground surface to have good grip.
    b. There are three of these in the diagram along the outside of the structure.
    c. Each have cabling (#5) that pulls on the bendable straight beams (#2).
    d. The pull is computerized and adjusts their lengths to keep the structure perfectly perpendicular to the ground.
4. Shock absorbing central point ball-joint central anchor (#4 in the diagram)
    a. Where the weight of the structure meets at a single point for diminished surface contact.
    b. Similarly to the Computerized Stake-Like Cable Anchors (#3), it is “stake-like” where it penetrates the ground surface to have good grip.
    c. Houses the central point ball (#6) and in the housing is a central point ball joint to allow the central point ball to turn as needed.
    d. Underneath the central point ball joint housing, is mechanism for vertical shock absorption (shocks are inside, whether spring or pneumatic shocks
        i. This allows the structure to “bounce” in the event of an earth quake, and “sway” if any of the Computerized Stake-Like Cable Anchors (#3), shift around as well whether vertical or horizontally in the event of an earth quake.
5. Outside Support Cabling (#5 in the diagram)
    a. Is placed inside each of the computerized Stake-Like Cable Anchors (#3) and pulls on the three bendable Straight beams (#2)
        i. Their lengths get adjusted accordingly as determined by the perpendicularity of the structure. As the central point ball (#6) deviates from the exact center of force of earth’s gravity when the structure turns, the lengths of these outside support cabling (#5) is adjusted to the right length to return the central point ball (#6) to be in parallel to the pull of earth’s gravity.
            1. This ensures the building remains perpendicular to the surface in the event of earth quake where ground surface may change (I.E. go up or down or side to side in variable places)
6. Central point ball (#6 in the diagram)
    a. Where the three bendable Straight beams (#2) meet inside the central point ball (#6)
    b. This allows the weight of the structure to be distributed at the base of the ball for diminished surface contact as weight is distributed to a single point.
    c. The central point ball (#6) sits inside the ball-joint, in the Shock absorbing central point ball-joint central anchor (#4).
        i. The central point ball (#6) bounces as necessary during vertical shock event.
        ii. The central point ball (#6) rotates in the event of horizontal shock which could occur at any of the three computerized Stake-Like Cable Anchors (#3) or at the Shock absorbing central point ball-joint central anchor (#4 in the diagram).
        iii. The central point ball (#6) is computer analyzed if is ever deviating from the center in the event of horizontal shock.
            1. The central point ball (#6) is returned to what is determined perpendicular to the force of gravity by the Outside Support Cabling (#5) which are pulled by the three Computerized Stake-Like Cable Anchors (#3)

Note: The reason we are analyzing the force of gravity and not the exact center of the ball being completely perpendicular to the ground in the below diagram is due to the unpredictable nature of surface state after earth quake, the Shock absorbing central point ball-joint central anchor (#4 in the diagram) **itself** may deviate from being perpendicular from when it was first placed in the ground. If that happens, the exact center would **not** be parallel to the vertical pull of gravity, and the building would not be perfectly standing straight as we humans stand straight parallel to the force of gravity.