



OPERATING INSTRUCTIONS for the Model 215L # SOIL SAMPLING TUBE

STEP 1: STARTING SOIL TUBE

IN SOFT SOIL OR IF AN ASSISTANT IS HANDY, UPRIGHT THE SOIL TUBE AND START BY PLACING IT IN THE SOIL (COMPLETE WITH POINT AND HEAD). IN HARD SOILS OR IN ABSENCE OF AN ASSISTANT, YOU MAY WANT TO UPRIGHT THE SOIL TUBE WITH THE HAMMER ALREADY INSERTED.

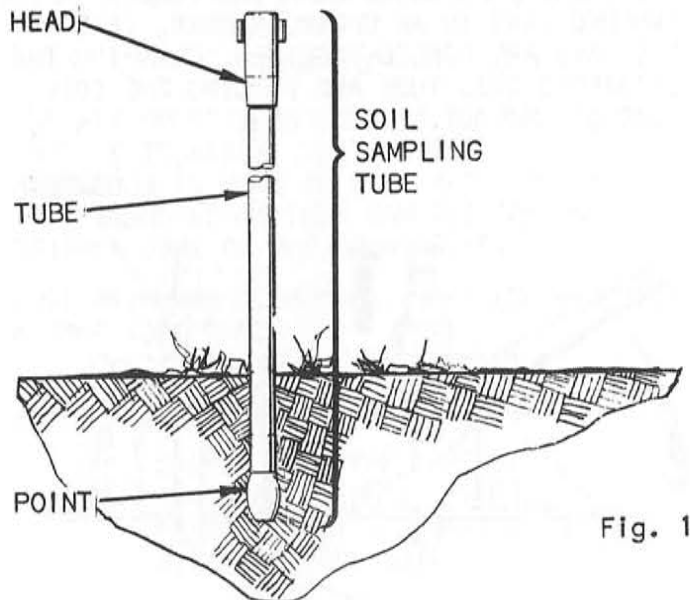


Fig. 1

STEP 2: INSERTING DROP HAMMER

DROP HAMMER IS INSERTED INTO SOIL SAMPLING TUBE. THE 1/2" DIAMETER ROD ON THE END OF THE DROP HAMMER IS USED AS A GUIDE ROD AND IS INSERTED AS SHOWN.

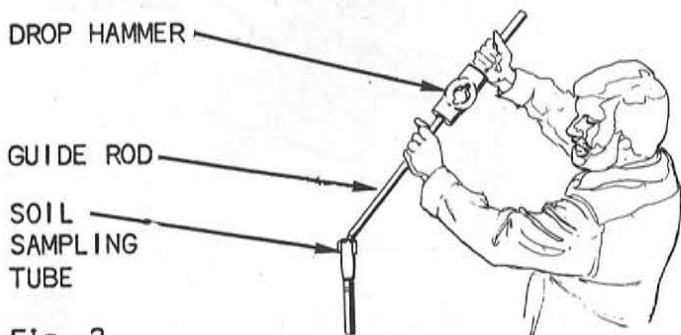


Fig. 2

STEP 3: DRIVING SOIL TUBE

DRIVE THE SOIL TUBE TO THE DESIRED DEPTH BY USING AN UP AND DOWN MOTION ON THE DROP HAMMER. MAKE SURE NOT TO EXCEED THE GUIDE ROD LENGTH OF THE HAMMER.

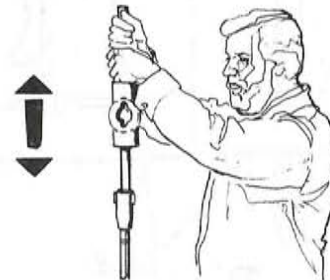


Fig. 3

STEP 4: REMOVAL USING DROP HAMMER

TO REMOVE THE SOIL TUBE, THE CENTRAL PORTION OF THE DROP HAMMER IS ORIENTED SO AS TO PASS BY THE SOIL TUBE HEAD USING PARALLEL KEYWAYS. ALIGN THE BLOCKED KEYWAYS IN THE HAMMER WITH CORRESPONDING KEYS ON THE SOIL TUBE HEAD AS SHOWN IN FIGURE 5. UPWARD MOTIONS OF THE DROP HAMMER WILL THEN DISLodge THE TUBE AND DRIVE IT IN AN UPWARD MANNER.

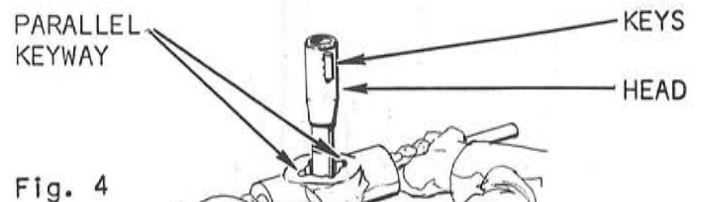


Fig. 4

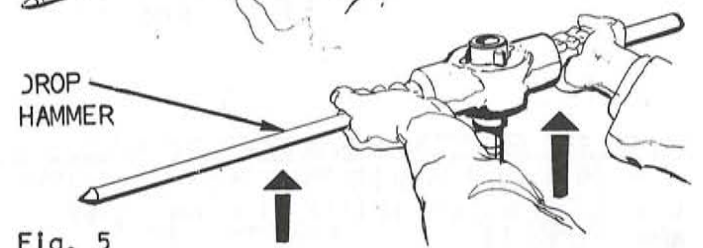


Fig. 5

STEP 4: REMOVAL USING PULLER JACK

TO REMOVE THE SOIL TUBE ORIENT PULLER JACK BASE IN LINE WITH SOIL SAMPLING TUBE AS SHOWN (FIG. 6)

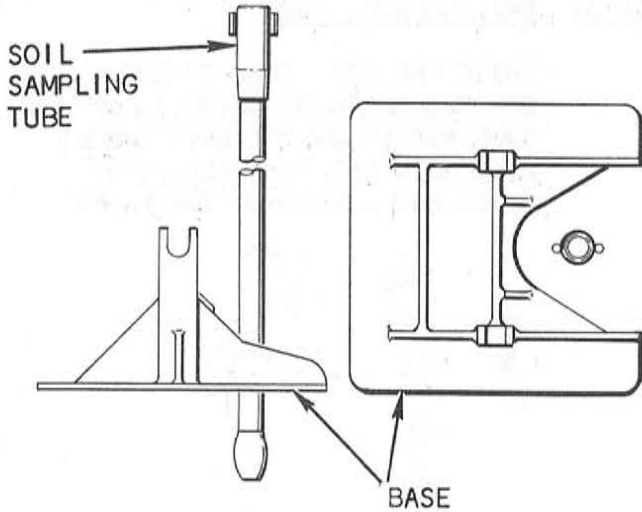


FIG. 6

SLIP THE LEVER ARM OVER THE SOIL TUBE HEAD ALLOWING IT TO REST IN THE DESIGNATED SUPPORT ARMS ON THE BASE AS SHOWN. (FIG. 7)

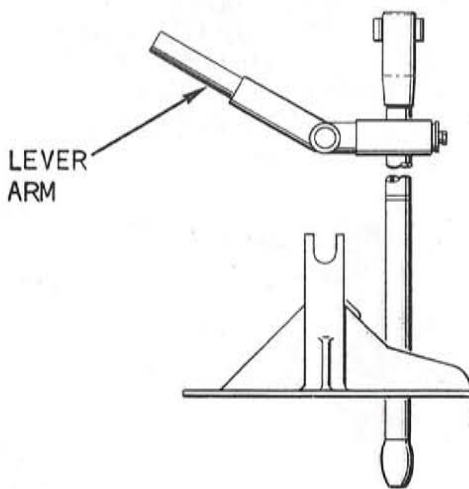


FIG. 7

PLACE THE GRIPPER JAWS AROUND THE SOIL TUBE IN SUCH A MANNER THAT THE JAWS JOINT LINE IS DIRECTLY IN LINE WITH THE LEVER ARM. (FIG. 8)

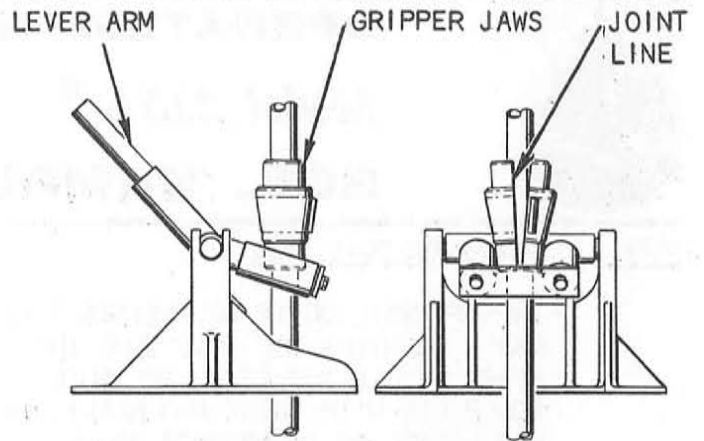


FIG. 8

A DOWNWARD MOTION ON THE LEVER HANDLE WILL NOW EXERT TREMENDOUS CLAMPING FORCES ON THE TAPERED JAWS IN AN UPWARD MANNER. (FIG. 9) THE JAWS ARE FORCED TOGETHER, CLAMPING THE ENTRAPPED SOIL TUBE AND FORCING THE SOIL TUBE UP AND OUT.

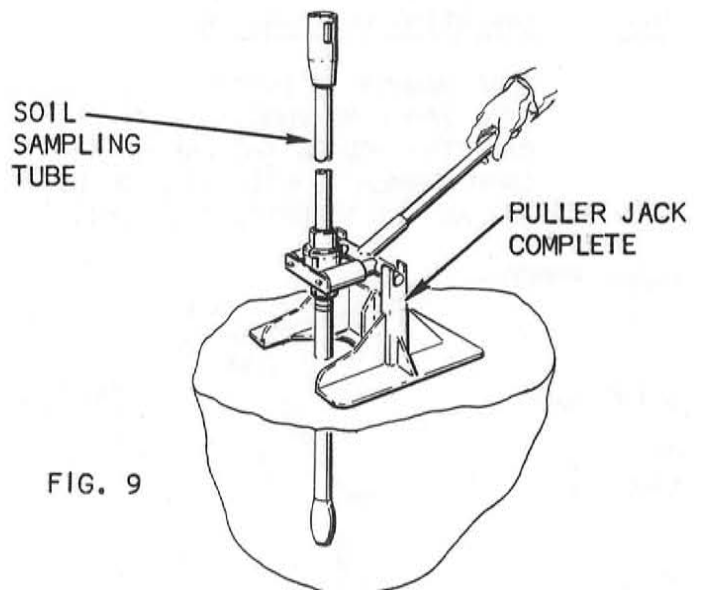
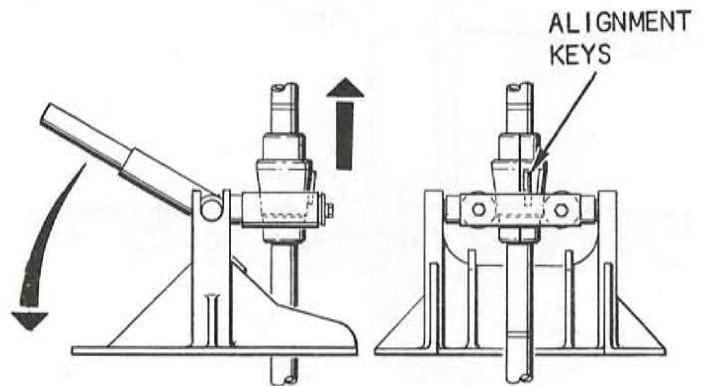


FIG. 9

AT THE END OF DOWNWARD PULLING MOTION THE LEVER ARM IS RETURNED TO AN UPWARD POSITION. THE UPWARD MOTION ALLOWS THE GRIPPER JAWS TO FALL FREE AND POSITION THEMSELVES READY FOR THE NEXT DOWNWARD PULLING MOTION. (FIG. 10)

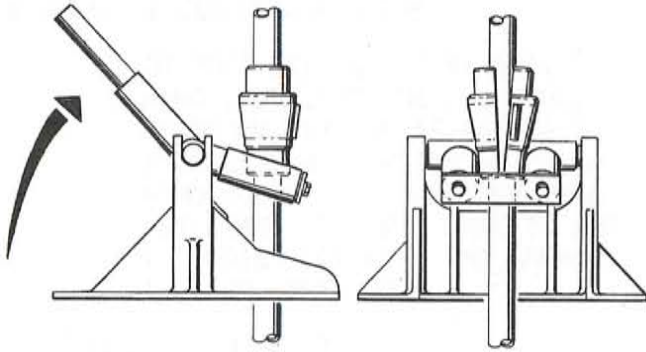


FIG. 10

THE ALIGNMENT KEYS LOCATED ON THE GRIPPER JAWS IS TO ASSURE THAT GRIPPER JAW JOINT ALIGNMENT IS KEPT IN LINE WITH THE LEVER ARM, ASSURING MAXIMUM COMPRESSION ON GRIPPER JAWS ON THE DOWNSTROKE.

JUST REMEMBER DOWN-PULL, UP-SLIDE AND PRESTO A FREE SOIL TUBE.

STEP 5: TO REMOVE THE SOIL SAMPLE

SIMPLY TURN THE TUBE "HEAD DOWN" AND LIGHTLY TAP THE HEAD AGAINST THE GROUND TO DISLodge YOUR SOIL.



Soilmoisture Equipment Corp. P.O. Box 30025, Santa Barbara, Calif. 93105 U.S.A.
