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Instructions for the  
erection of boundary  
monuments on surveys of  
Dominion lands

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**FACULTY OF FORESTRY**

APR 19 1916

**UNIVERSITY OF TORONTO.**



# INSTRUCTIONS

FOR THE

## Erection of Boundary Monuments on Surveys of Dominion Lands.

1. A boundary monument consists of an iron post planted midway between four pits or in the centre of a circular trench, with or without a mound (figs. 1 to 6).

2. The standard survey post (fig. 7) consists of a piece of one inch butt welded iron pipe, 30 inches in length, filled with concrete. A malleable iron foot plate  $3\frac{1}{2}$  inches in diameter, and a bronze cap  $2\frac{1}{2}$  inches in diameter, are fastened to the bottom and top of the post, respectively. The post weighs 7 pounds. It is packed in basswood crates of ten posts each, weighing 80 pounds.

### MOUNDS, PITS AND TRENCHES.

3. All mounds, pits, and trenches are of the same dimensions, whether they indicate township, section, quarter-section, or other corners.

The top of the post is flush with the surface of the ground, except on rock, where it is not possible to make a hole for the post and to dig pits.

4. Whether a mound is or is not built, the centre of each of the four pits at a corner is seven feet from the post which is planted in the centre of the square formed by the pits.

5. A corner mound is five feet square at the base and 30 inches high. Except on correction lines and lines be-

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tween different systems of survey, the centre of the mound built at a township, section or quarter-section corner is ten feet due south from the post as illustrated by fig. 1 for a township or section corner.

6. At a corner on the south side of a correction line or of an east and west line between different systems of survey, or on the west side of a north-and-south line between different systems of survey, the centre of the mound is ten feet southwest from the post (fig. 3).

At a corner on the north side of a correction line or of an east and west line between different systems of survey, the centre of the mound is 10 feet northwest from the post (fig. 4).

At a corner on the east side of a north-and-south line between different systems of survey, the centre of the mound is 10 feet southeast from the post (fig. 6).

7. At other corners, the general principle is to place the mound on the lands which it is intended to mark, and off the road allowances, as illustrated by fig. 2, but its centre is always placed 10 feet from the post and at the regular distance from the pits.

8. A stone mound is built in preference to an earth mound, when stones are available, but pits must be dug also, the relative positions of the post, mound, and pits being as already described.

On rock, where pits cannot be dug or a hole made for the post, a stone mound of the regular dimensions is built around the post.

9. A witness post stands in the centre of the circle formed by the trench. The centre of the mound is on the line surveyed and at a distance of 10 feet from the post in the direction opposite to the corner witnessed (fig. 5).

The rules of clause 8 regarding stone mounds apply to witness monuments.

10. A hole 30 inches deep has to be made for receiving the post. After inserting it, with the crown towards the

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north, the hole is filled with earth which is tamped around it. In doing so, care must be taken not to strike the bronze cap.

In ground not frozen, and tolerably free from stones, the most convenient tool is a post-hole auger.

In stony or frozen ground, a bar of octagonal drill steel, with chisel ends, is the best tool.

### INSCRIPTIONS ON THE POSTS.

**11.** The inscriptions on the posts are made with steel dies.

The set of seventeen dies consists of a  $\frac{5}{16}$ -inch straight line die, of the letters N, S, E, W, T, R, of the monogram LS for "legal subdivision," and of the figures 0 to 8 inclusive, 9 being made by turning 6 upside down. A string may be inserted through a hole in the shank for tying a strip of red fabric, if deemed necessary for picking up the die readily in case it should drop in the brush or grass. The dies are packed in leather cases with a separate compartment for each.

**12.** At a township or section corner not on a correction line or an initial meridian or a line between different systems of survey, four  $\frac{5}{16}$ -inch cross-lines are stamped with the straight line die on the bronze cap, to represent the four section lines meeting at that point; the number of the corresponding section is stamped in each of the angles. Below the cross, the number of the township preceded by the letter T and the number of the range preceded by the letter R, are stamped. In ranges east of the Principal meridian, the letter E is stamped after the number of the range. The use of the letter W to denote ranges west of the Principal meridian has been discontinued. The number of the year is to be completed on all posts (figs. 8, 10, and 11).

**13.** The post at a quarter-section corner not on a correction line, an initial meridian or a line between different systems of survey is stamped in the centre with two  $\frac{5}{16}$ -inch lines running up and down or right and left, as the case may be, to represent the section line, and the numbers of the adjoining sections are stamped on the respective sides of this line. Below the centre, the township and range are marked as for a township or section corner (figs. 16 and 17).

14. The post at a township or section corner on a correction line, or an initial meridian or a line between different systems of survey is stamped with two  $\frac{5}{16}$ -inch straight lines in the centre to represent the above line. On the proper side of the stamped line and at right angle thereto a  $\frac{5}{16}$ -inch line is stamped to represent the corresponding section line. In the two angles thus formed, the numbers of the corresponding sections are stamped. On a correction line and on a line running east and west between different systems of survey, the numbers of the township and range are stamped above or below the centre of the cap according as the corner belongs to a township situated north or south of the aforesaid line. In all other cases the numbers of the township and range are stamped below the centre (fig. 12).

In the case of initial meridians, the only section numbers stamped are those of the sections in range one, those of the sections in the closing range from the adjoining meridian not being always known at the time of the survey of the meridian (fig. 15).

15. The post at a quarter-section corner on a correction line or an initial meridian or a line between different systems of survey is marked like the township or section corner post on the said lines except that there are only two  $\frac{5}{16}$ -inch stamped lines in the centre to represent the section line, and only one section number (figs. 19, 20, and 21).

16. The post at a legal subdivision corner, not on a correction line or a line between different systems of survey or on an initial meridian, is stamped in the centre with four  $\frac{5}{16}$ -inch lines, to represent the legal subdivision lines; the legal subdivision numbers preceded by the monogram LS are stamped in the four angles thus formed.

For a corner in the interior of a section, the number of the section is stamped above the centre of the cap (fig. 22).

For a corner on a section line, the numbers of the sections are stamped on the respective sides of the centre of the cap (figs. 23 and 24).

The numbers of the township and range are not inscribed on the posts of legal subdivision corners.



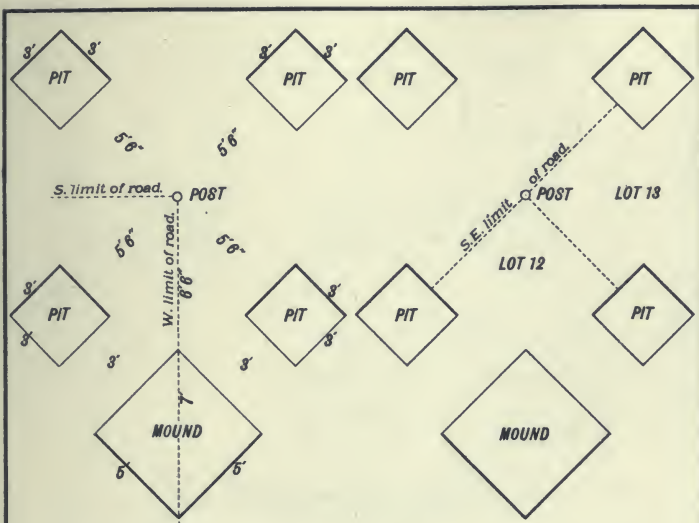


Fig. 1. Monument at township or section corner defining four sections.

Fig. 2. Monument at corner between lots 12 and 13 of a settlement.

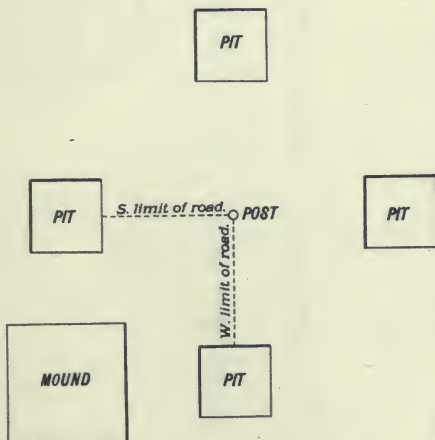


Fig. 3. Monument at township or section corner for south side of correction line.

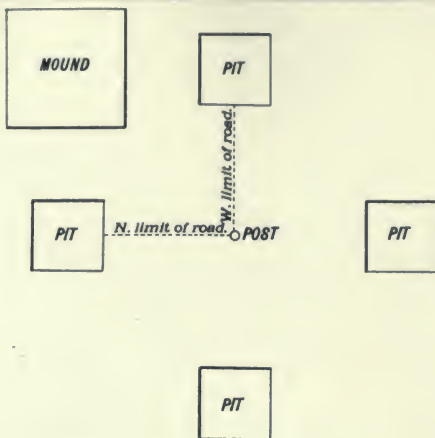


Fig. 4. Monument at township or section corner on north side of correction line.

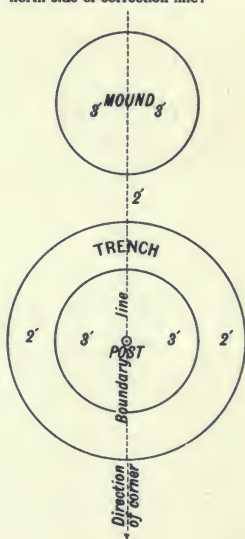


Fig. 5. Witness monument for corner south of monument.

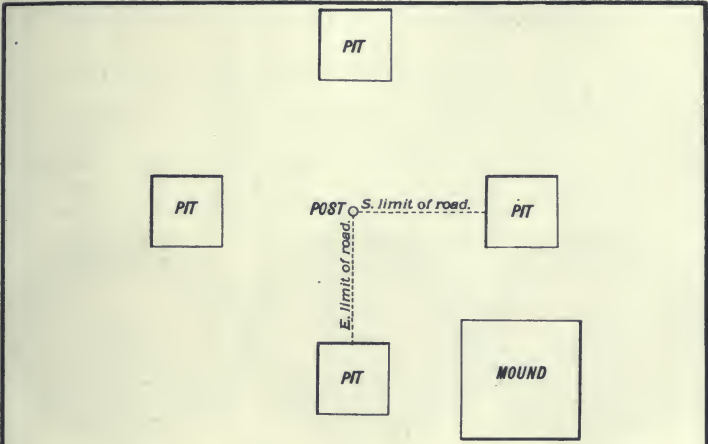


Fig. 6. Monument at township or section corner on east side of line between different systems of survey.

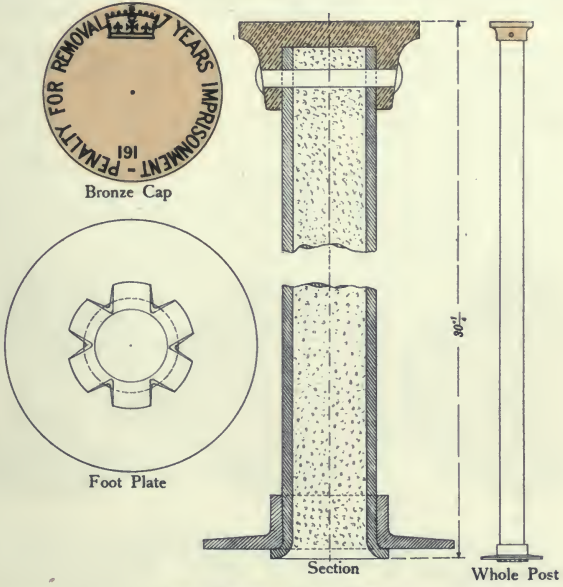


Fig. 7. Standard Survey Post.

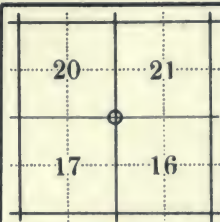


Fig. 8. N.E. corner 17-138-18  
Section corner in interior  
of township.

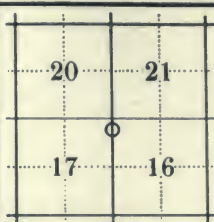


Fig. 9. N.E. corner 17-138-18  
Witness to section corner  
in interior of township.

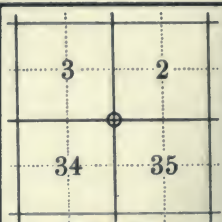


Fig. 10. N.E. corner 34-87-16  
Section corner on north  
outline of township.

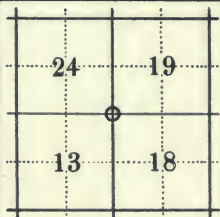


Fig. 11. N.E. corner 13-87-16  
Section corner on east  
outline of township.

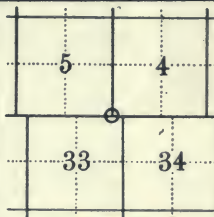


Fig. 12. S.E. corner 5-147-13E  
Section corner on north  
side of correction line.



Fig. 13. S.E. corner 5-147-13E  
Witness to section corner on  
north side of correction line.



Fig. 20.  $\frac{1}{4}$  sec. cor. on North By. 32-146-13 E. Quarter sec. cor. south of correction line.



Fig. 21.  $\frac{1}{4}$  sec. cor. on East By. 24-125-1 Quarter sec. cor. on initial meridian.

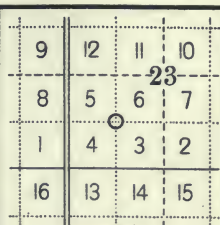


Fig. 22. Corner of L. S. 3, 4, 5 and 6 of sec. 23. Legal subdivision corner in the interior of a section.



Fig. 23. Corner of L. S. 13 and 14 of sec. 14 and L. S. 3 and 4 of sec. 23. Legal subdivision corner on east and west section line.

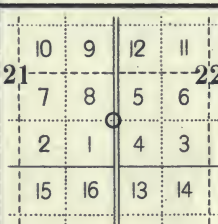


Fig. 24. Corner of L. S. 4 and 5 of sec. 22 and L. S. 1 and 8 of sec. 21. Legal subdivision corner on meridian section line.



Fig. 25. Corner of L. S. 1 and 2 of sec. 3. Legal subdivision corner on correction line.





Fig. 14. N.E. cor. 32-146-13 E  
Witness to section cor. south  
of correction line



Fig. 15. N.E. cor. 13-125-1  
Sec. cor. on initial meridian



Fig. 16.  $\frac{1}{4}$  sec. cor. between  
20 and 21-138-18  
Quarter sec. cor. in interior  
of township.

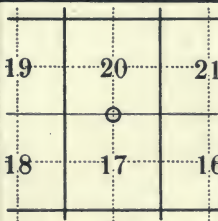


Fig. 17.  $\frac{1}{4}$  sec. cor. between  
17 and 20-138-18  
Quarter sec. cor. in interior  
of township.

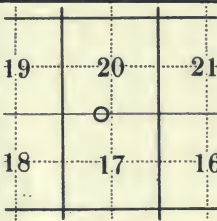


Fig. 18.  $\frac{1}{4}$  sec. cor. between  
17 and 20-138-18  
Witness to quarter sec. cor.  
in interior of township.



Fig. 19.  $\frac{1}{4}$  sec. cor. on  
South By. 5-147-13 E.  
Quarter sec. cor. north of  
correction line.



17. The post at a legal subdivision corner on a correction line or on a line between different systems of survey is inscribed for the legal subdivisions which it is intended to mark (fig. 25).

On an initial meridian, the post is marked only for the legal subdivisions in range one.

18. A witness post is marked like the post at the corner it is intended to witness, and there are added the letters WT as an abbreviation of "witness," the distance in chains to the section or quarter-section corner, and the letter N, S, E, or W, to indicate the direction of the corner. This additional inscription is placed above the centre of the cap, except when the numbers of the township and range are there, when it is placed below the centre (figs. 9, 13, 14, and 18).

There are no witness posts for legal subdivision corners.

19. The general rule for marking a post other than those described above is to stamp in the centre lines representing the boundary lines passing through or ending at the post, and to mark the designations of the adjoining parcels of land in the corresponding angles.

#### FIELD NOTES.

20. In the field notes the following abbreviations are to be used instead of those prescribed in clause 204 of the Manual:—

I. for iron post.

Wo. for wooden post.

I. Pt. for iron post and four pits.

I. Pt. M. for iron post, pits and mound.

I. Pt. S. M. for iron post, pits and stone mound.

I. S. M. for iron post in stone mound.

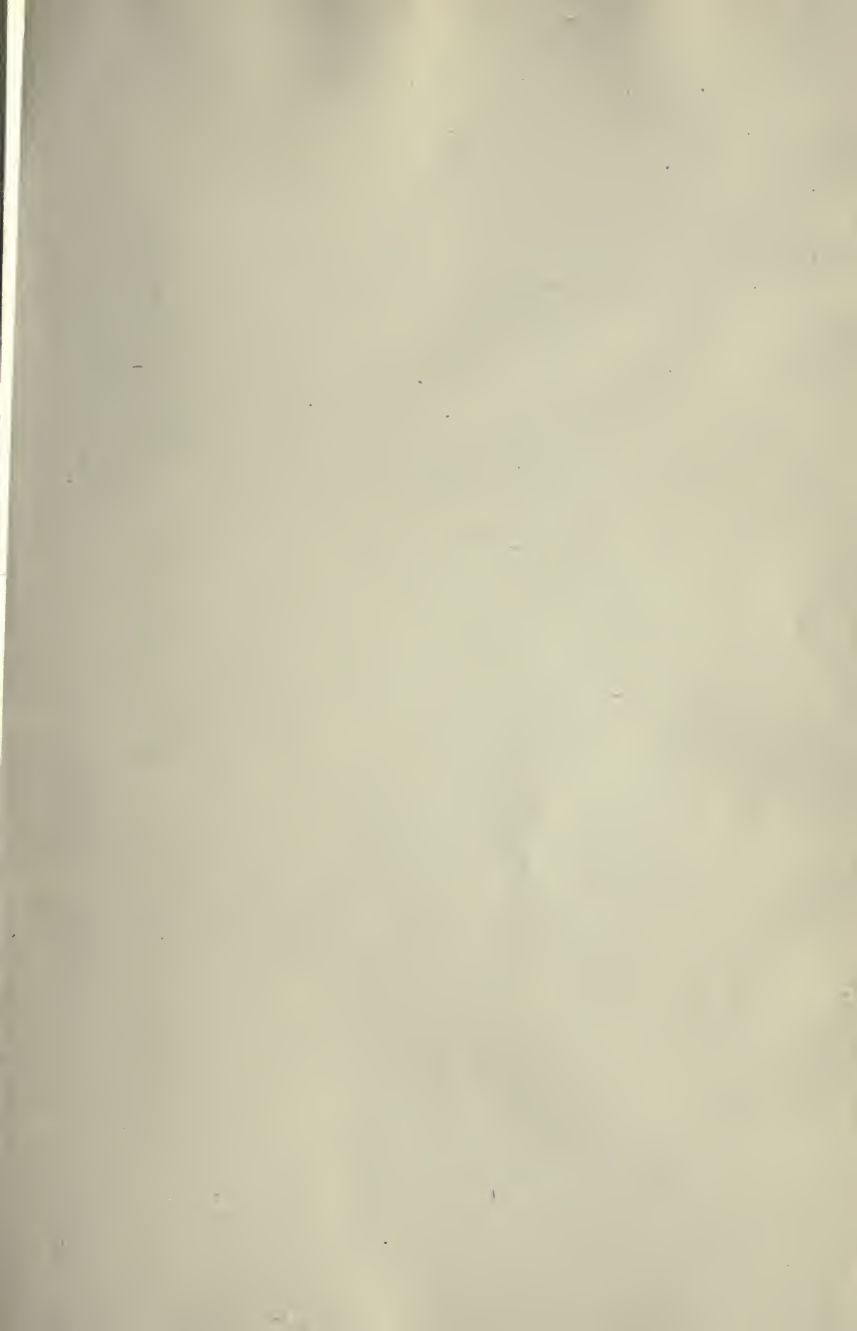
Wt.I.T. for witness iron post and trench.

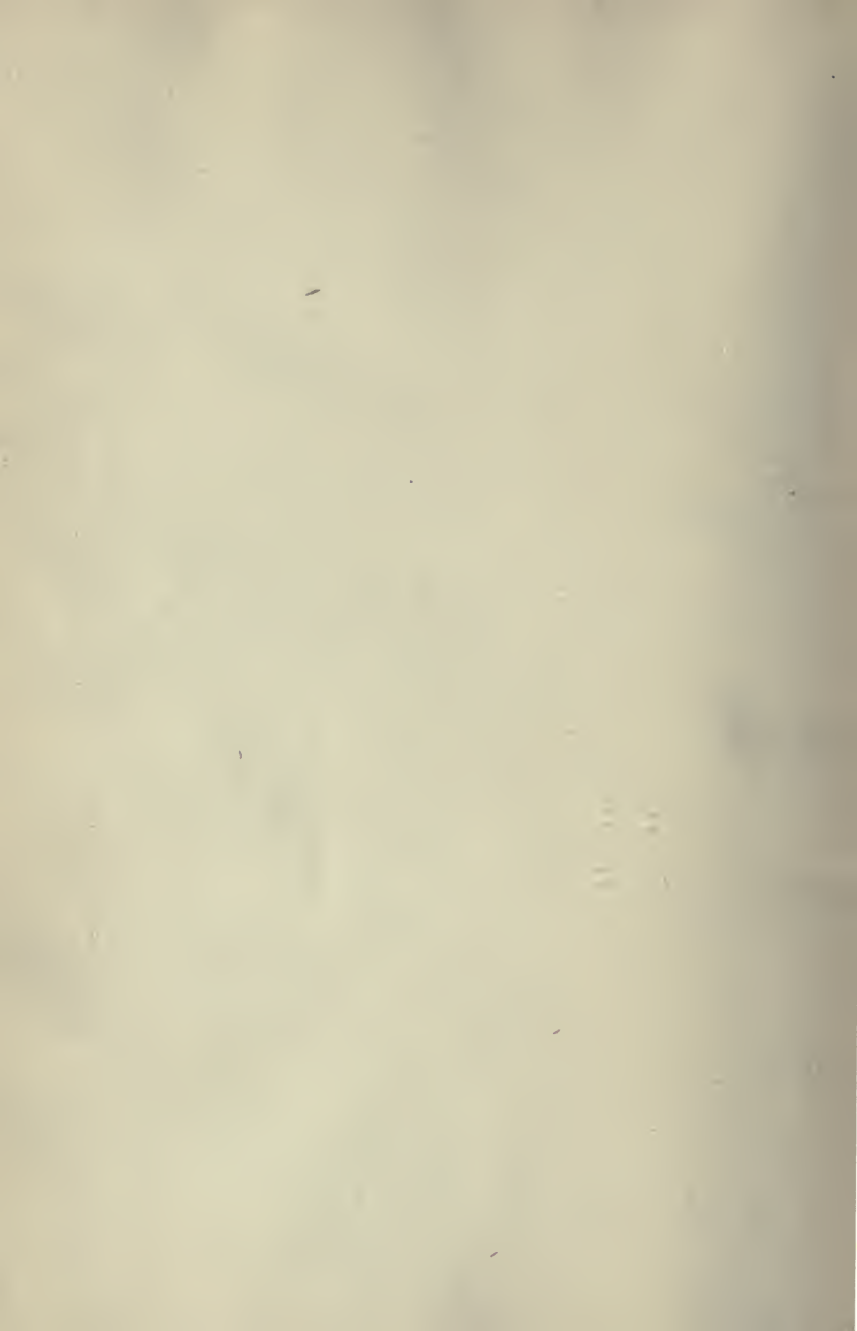
Wt.I.T.M. for witness iron post, trench and mound.

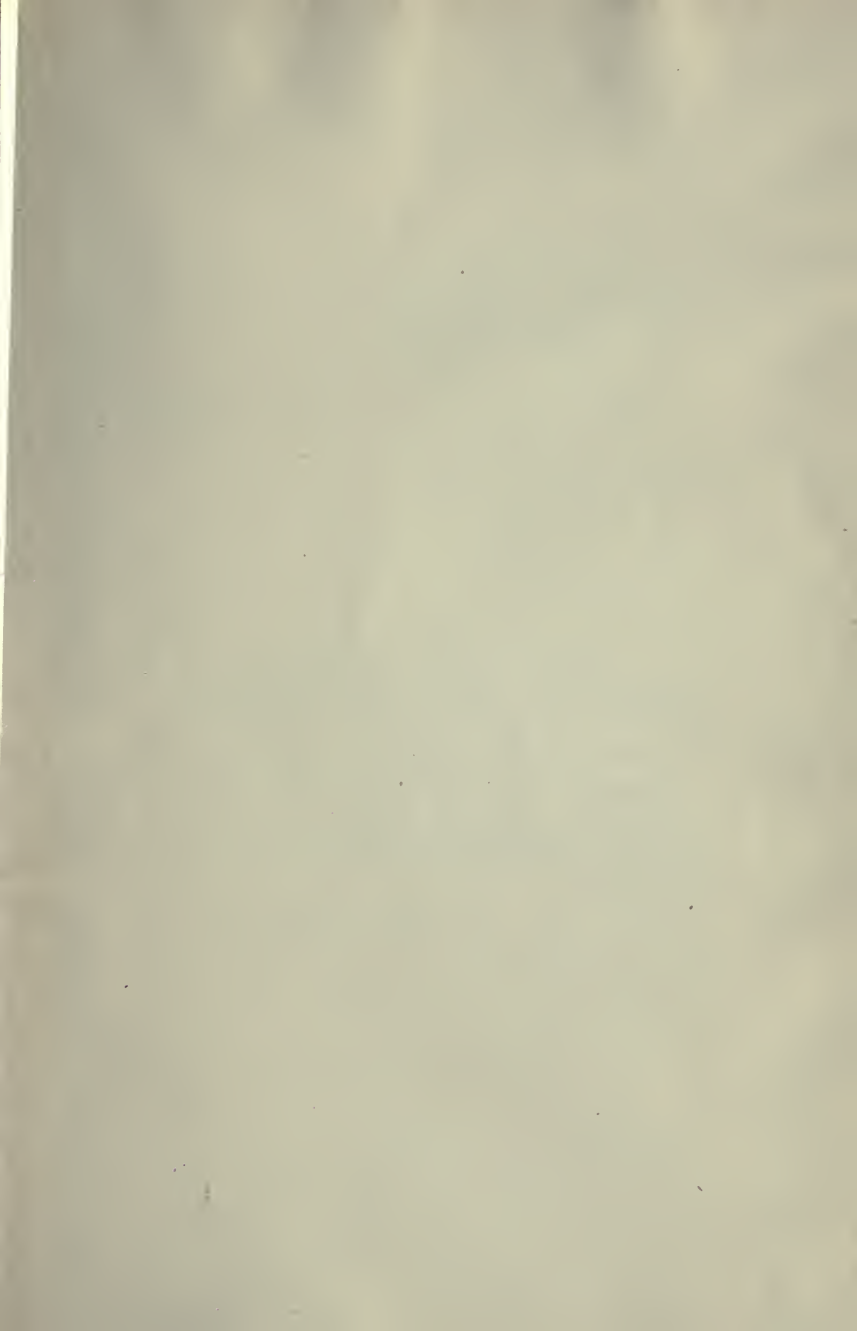
Wt.I.T.S.M. for witness iron post, trench and stone mound.

Wt.I.S.M. for witness iron post in stone mound.













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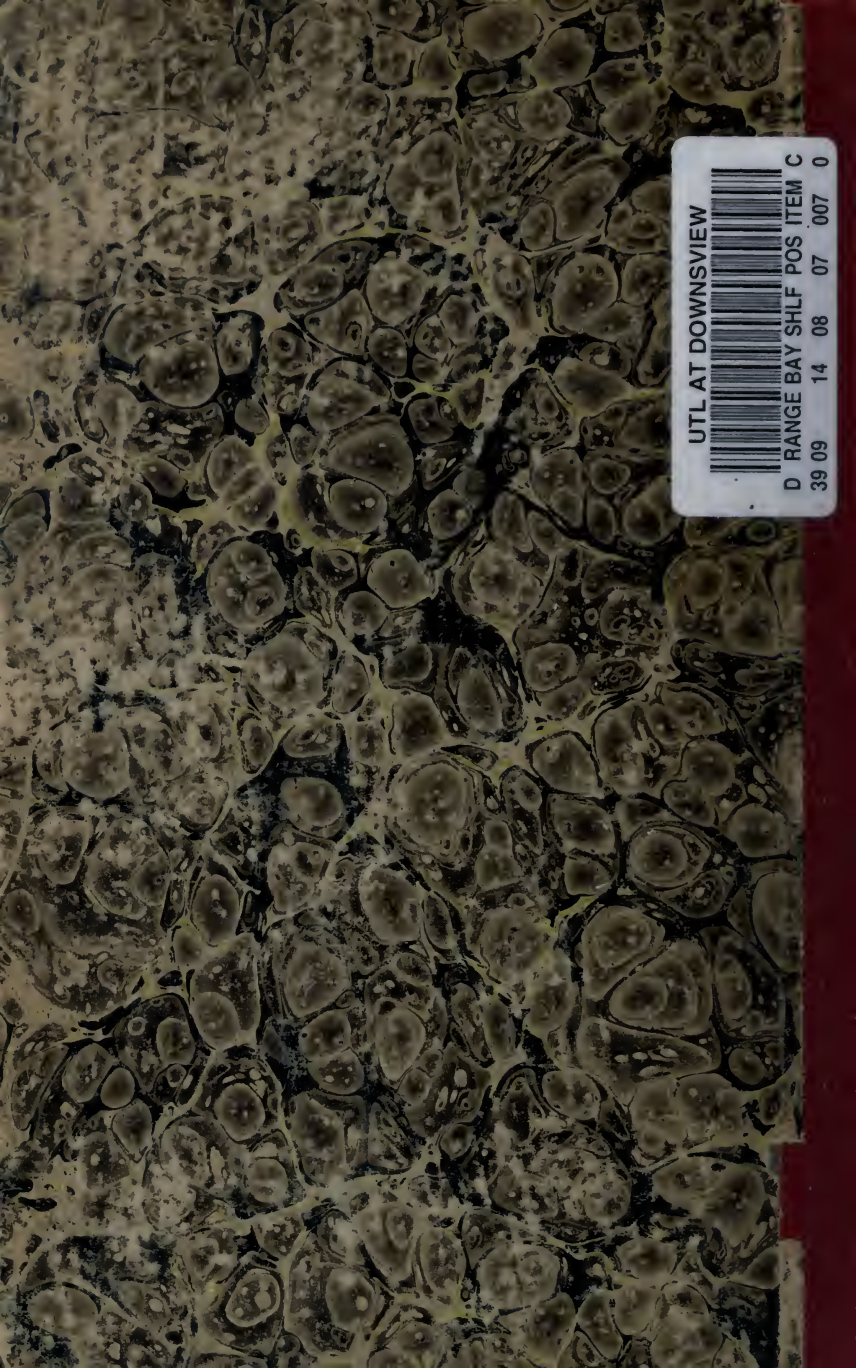
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