

**Wells have been used to obtain water since ancient times. Some wells have been in continuous use for hundreds of years. Others are fairly new, but have been built by traditional methods. Good quality water can usually be obtained from a well that is properly constructed, maintained, and used. Some traditional wells are excellent. Others are not and need upgrading.**



**Many traditional wells are unsatisfactory because ...**

**1.**  
  
**They are near pit latrines, rubbish dumps, or animal pens, which pollute the groundwater that is the source for the well.**

**4.**  
  
**The sides collapse, tu . . . ducwaterground.**

## How can wells be upgraded?

1.

Move rubbish dumps and animal pens far away from the well.

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A well which is very near to a deep pit latrine should not be upgraded.

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2.

Deepen the well so that the bottom reaches the groundwater during dry weather

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C

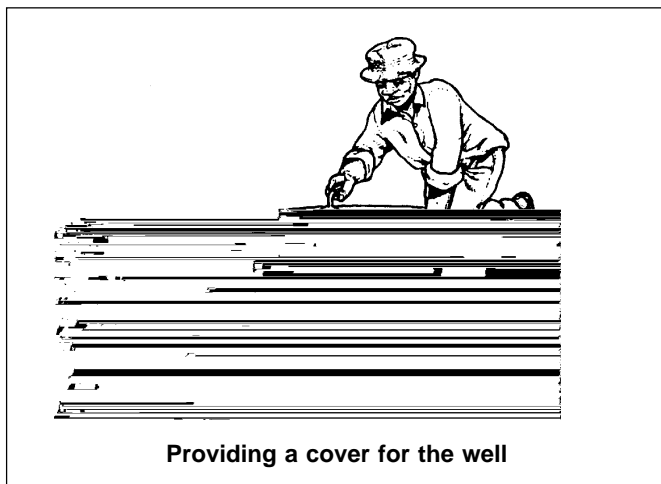
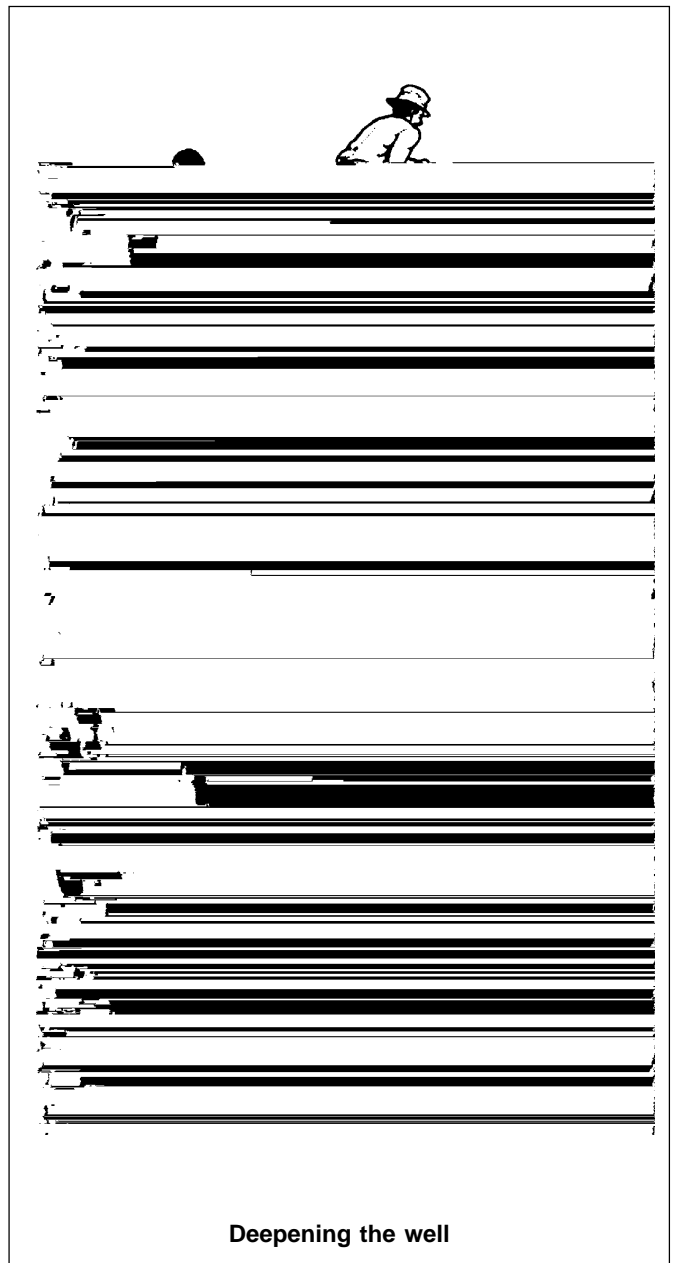
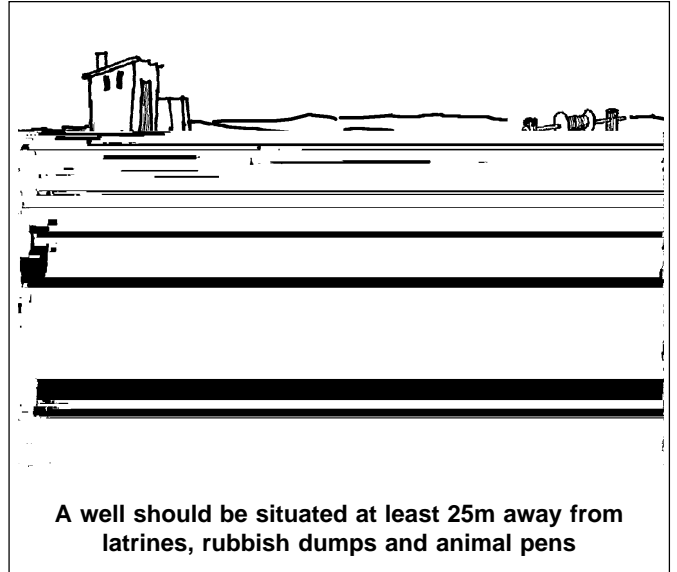
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3.

Improve the well so that people and animals cannot get in

V V



4.

Line the well

M

- Bricks: ( )
- Natural stone ( ):
- Concrete blocks: ( )
- Concrete rings:
- In-situ concrete: C ( )

The bottom of the well should be lined so that water can flow in:

- C ( )
- M ( )
- ( )

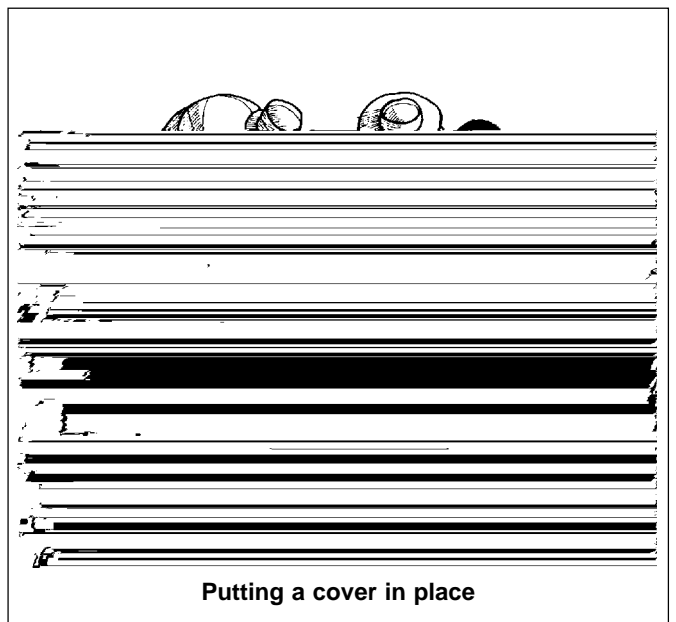
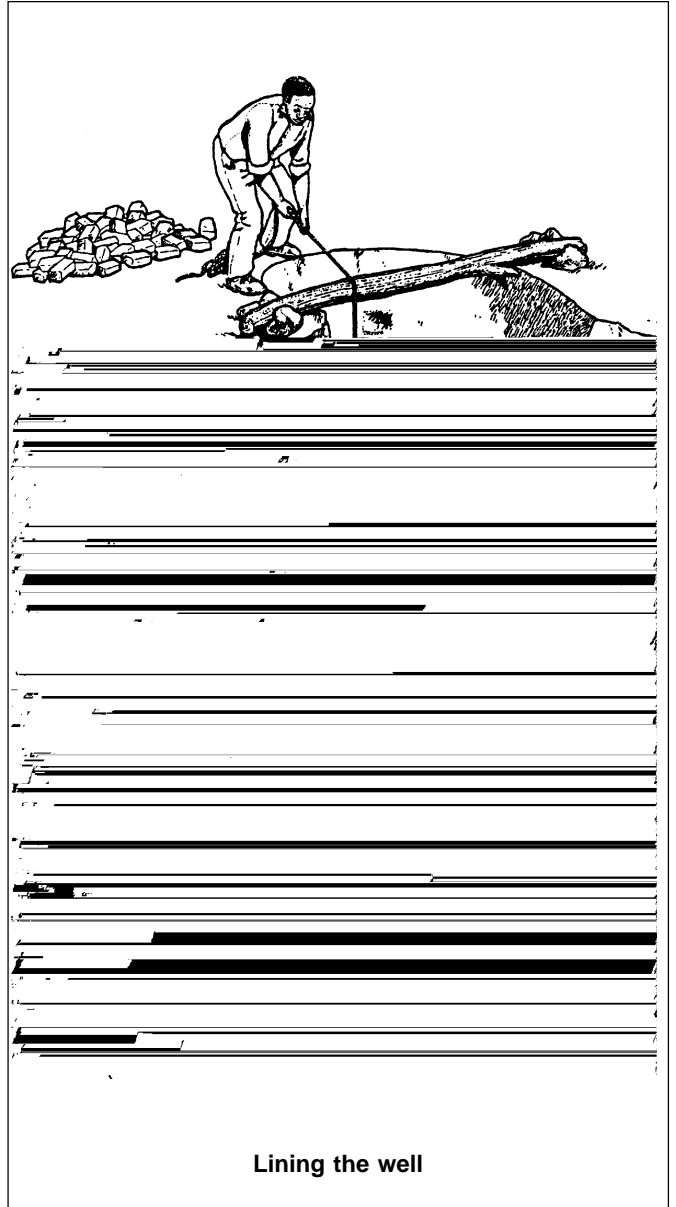
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5.

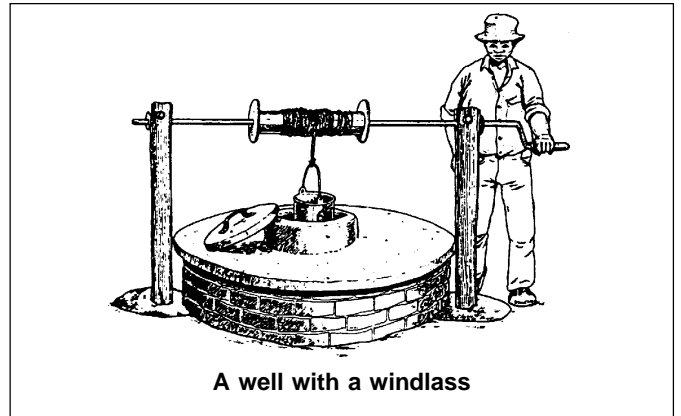
Provide a cover or a parapet wall

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**6. Install a windlass or handpump**

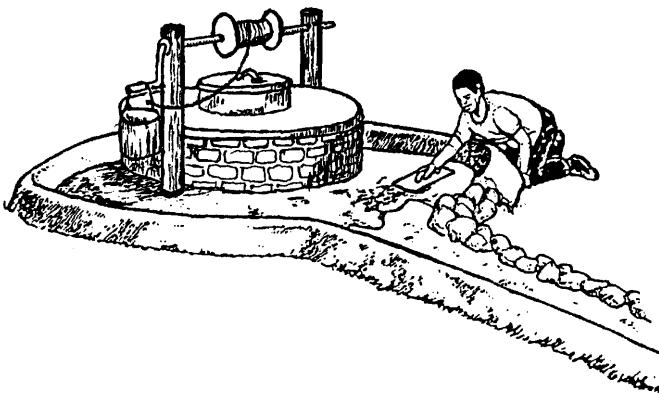
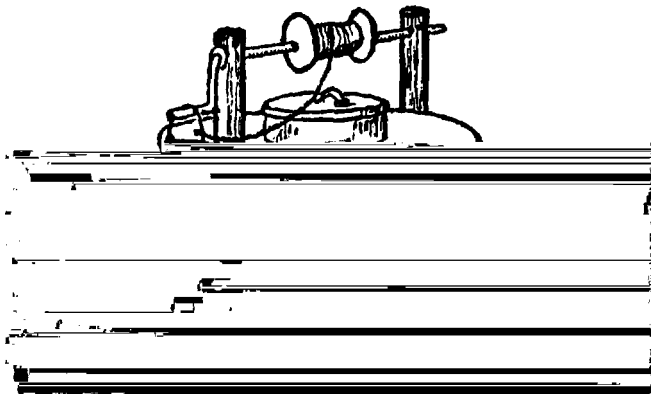
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**What else needs to be done?**

Even if a traditional well has been improved by giving attention to all the matters listed above, it may still be unsatisfactory without other improvements.

A well head which is surrounded by a pool of spilled water is unpleasant for users, can lead to pollution of the water in the well, and may provide a breeding place for mosquitoes.



**Therefore...**

**an apron and a drain should be provided.**

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