B

Will you look into this crank case just a moment?

The crank shaft in orby is supported by three long, heavy bearings—one at each end of the crank case and an intermediate bearing between the two cranks.

The total bearing surface aggregates a length of 22 kg inches—this is more than one-half of the total distance between the outer sides of the two end bearings.

No Broken Crank Shafts

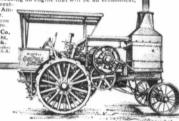
With this construction, there is no possibility of the constant shock causing vibration and breaking the

The shaft itself is massive -4^{7}_{16} inches diameter at the bearings, 4½ inches diameter at the crank pins. It is forged from a solid block of steel superior in quality to the United States Naval specifications.

Our Warranty Against Breakage

We guarantee our crank shafts against breakage, and replace free of charge any broken trank shafts. We build of from draw-bar to radiator with the one





from the terrible wound in his thigh; but still he was a wolf, there was life still in him, and the north called him. hobbled limply toward the river, rolled and fell down the steep bank, and a hundred v rds farther on reached the spreading willow thickets. On and on he hurried, limping, stumbling and staggering, stopping only once to quench his terrible thirst. Dodging from one thicket to another, he made half a mile by darkness. Then, half a mile by darkness. Then, because he could go no farther, he stopped and fell down to lick his stiffening wounds. Any other creature would have laid down to die, or indeed have yielded to death's call long before; but be-cause he was a wolf and yet had life in him he refused to die.

That night he crawled another mile; and all the following day he lay in hiding and gazed wistfully across the prairie at the long line on the horizon to the northward. Next night he crept into a farm yard and feasted on several sucking pigs; and before morning he somehow crossed that five-mile stretch of prairie, and entered the northern woods.

He had reached the goal of his He would see again weary life. his home, the land of the pines and spruces. It lay many miles yet, away to the north; but there was shelter all the way, and he knew that he could reach it. voices from the northern wilderness, singing of evergreens, whispering of aspens, the call of the moose, and all the other wood sounds-they that had spoken to him so far away-would now whisper in his ear. The joy in his heart was great, and it was wellmerited; for through the camp of his enemies, one hundred thoussand strong, he had run the gauntlet of danger and suffering and reached the end of his journey along the perilous way.

The Smallest Engine.

Tiny Tim is the name of the smallest engine in the world. It is made of gold and steel, and is so small that a common housefly seems large in comparison. weighs just four grains complete. which is the weight of an ordinary match. It takes over 100 such engines to weigh one ounce, almost 2,000 to weigh a pound. and more than 3,000,000 to weigh

The engine-bed and stand are The shaft runs in hardened and ground steel bearings inserted in the gold bed. bearings are counter-bored from the inside to form a self-oiling bearing. The fly-wheel has a steel center and arms, with a gold rim, and the complete wheel weighs one grain. The cylinder is of steel, with octa-

gonal base, highly polished.

The stroke is 1-32 of an inchbore, 3-100 of an inch. Seventeen pieces are used in the construction of this engine.

The speed of the engine is 6.000 revolutions per minute. When running 100 per second no motion is visible to the eye, but it makes a noise like the noise of a mosquito. The horse-power is 1-489,000 of one horse-power. Compressed air is used to run it; and it may be of interest to note that the amount required to make it hum can easily be borne on the eyeball without winking.

Good Water and Pure the Farmer's Friend

Continued from page 7

water is placed in a clean bottle, tightly stoppered and kept warm for about three days, its taste, odor and color at the end of that time will practically determine its degree of purity. Bacteria can live for about three days, only, in running water; it is in standing and stagnant water that

they flourish and multiply.
The farmers of the West must look to their water supply. old-fashioned method of digging a well represents the earliest attempts of mankind to provide an artificial water supply. That the process is still in use in many localities is due largely to the fact that the great advantages of drilled wells are not generally known. Fortunately it is in growing disfavor and will soon be a thing of the past. When this time comes the farmer will have largely done his part in the great movement towards sanitation and in promoting the health, strength and longevity of his specie.

Problem of The Deserted House

believable, positively nightmar-

ish; yet true enough, for here he stood in the subway. was no question about that; for in the distance was the roar of a train, and he discreetly withdrew into the little door, closing it carefully behind him until it had passed

Finally he popped out again and closed the door behind him, paused only to admire the skill with which a portion of the tilin the tunnel had been utilized as a door, then went on It was still across the tracks. early morning; the trains were as vet few and far between ; so he had a little leisure for the minute examination he made of the tiled walls opposite the closed door. It was perhaps ten It was perhaps ten minutes before he found a tile that was loose. He hauled at it until it came out in his hand, revealing a dark aperture beyond.

Within fifteen minutes, therefore, from the time he undertook the search for this second door he was standing in another narrow, earthly tunnel which beck-oned him on. With the ever ready light to guide him, and still proceeding with caution, he advanced for possibly thirty feet; then came a turn. Round the turn he found himself in a sort of room—another cellar, perhaps. He permitted his light to go out, and stood listening. straining his squint eyes. After a time he was satisfied and flashed his light again.

Directly before him were half a dozen rough steps, leading up to what seemed to be a trap door. He had barely time to no-



