PROPER METHOD OF TEMPERING DRILL STEEL AND PICKS.

Drill steel should be tempered dark straw color for hard rock. The drills should be first heated and forged to the proper shape and size and allowed to cool. Later, when the sharpening has been completed, they should be reheated to redness and then quickly plunged and tempered. The temper may also be drawn by first plunging the reheated drill about an inch and withdrawing it and scouring the bit on a sanded board, watching the color slowly descend toward the bit until it has assumed a straw color, due to formation of iron oxide, when it should be plunged several inches and held and stirred about under the water until cool enough to prevent destroying the temper.

Picks should be tempered a deep blue. Drills tempered to straw color are very hard and brittle. If the corners check and break off, make the color a little darker, until they will stand. Avoid overheating, both in forging and in reheating to temper.

The amount of carbon contained in a steel has a direct influence on its "hardening" properties. A steel containing one per cent carbon can be made as hard and nearly as brittle as glass. The reheating of the steel is probably the most important point.

If steel of 1.10 per cent carbon heated to 700 degrees C. and plunged suddenly into cold water, it is not hardened; but if it be heated much higher, say, 880 or 900 degrees C. then cooled slowly to 700 degrees C. and plunged in cold water, it is hardened. This accounts for the fact that often plunged drills are not properly tempered, having been overheated.

Poor steel can not be made good by heating and hardening processes, but good steel can be easily spoiled by improper heating. Iced brine (twenty per cent solution) cools and hardens steel more rapidly than pure water, but is not recommended in tempering steel drills.—Mining and Scientific Press.

OFFICIAL RECORDS.

The following instruments were filed at the Baker county court house during the week ending Nov. 17, 1902.

REAL ESTATE TRANSFERS.

DEEDS.

Oct. 31—Harry E. Baker and wife to Jas. West, tract and house in South Baker; $1,600.

Nov. 11—Roy H. Miller and wife to A. W. Ellis, nearly all of Vinson's adn, Sumpter; $1.

Sept. 18—Ida A. Niven and husband to J. D. Grove, lot 3, B. 1, Whitney, Oreogn; $100.

Nov. 17—A. Stangier and wife to R. Wallbrum, lots 9 and 10 B. "D", DeRoo's, adn, B'y City; $450.

July 7— Callie Magee to A. E. Quinlan, lot 9, B. 9, South Sumpter; $700.

Oct. 24 —Ellis Leep to Mrs. E .I. Moore, 80 acres in Secs. 18 and 17 T. 8 R. 46 E.; $1,200

Oct. 12—R. N. Graves to Hewitt Land Co., 160 acres in Secs. 8 and 17 Tp. 11 R. 38 E; $675.

Oct. 12—R. L. Graves et al to Hewitt Land Co., 320 acres in Sec. 7 and 8 Tp. 11 R. 38 E; and 160 acres in Sec. 14 Tp. 11 R. 39 E; and 160 acres in Sec. 17 Tp. 11 R. 83 E: and 160 acres in Secs. 7 and 8 Tp. 10 R. 38 E; $3,525.

Oct. 31—F. Perkins to D. C. Perkins, 80 acres in Sec. 13 T. 8 R. 39 E.; $1.

Oct. 3—D. C. Perkins et al to J. C. Perkins, W ½ SW ¼ Sec. 13 T. 8 R. 39 E.; $1.

Nov. 5—E. V. Eastabrook to H. C. Eastabrook, ½ interest in 80 acres in Sec. 3 T. 8 R. 42 E.; $425.

Nov. 10—E. B M. Daniel to Fannie J. McDaniel, lot 1, and S ½ lot 2. B 4, in Boyd's adn B. City; $1.

Nov. 14—Sumpter Townsite Co. to L. Mae Wright, lot 1, B. 8, South Sumpter; $500.

Nov. 14—Ellen Nelson to G. W. Hulick, 160 acres in Sec. 33 T. 8 R. 43 E.; $500.

Nov. 10—Elizabeth Pointer and husband to Jesse Whittier, 160 acres in Sec. 26 T. 10 R. 40 E.; $500.

Nov. 14—B. A. Sturgill et al to Norta A. Shanks, W. 50 feet lots 11 and 12, B. 6, Sumpter Heights adn; $150.

MINING MATTERS.

DEEDS.

Nov. 25' 99—Chas. M. Pierce et al to Pierce G. M. Co. "Cold Gold" and two quartz claims; $3,600.

July 14—L. Van to A. S. Love, ½ interest "Red Bell No. 1" and five quartz claims; $100.

July 6—Mohawk M. & M. Co. to W. W. Cotton, Mohawk, and other quartz claims; $1.

Nov. 6—A. W. Anthony and wife to Hillsboro G. M. Co., 140 acres mining ground in Sec. 36 T. 6 R. 43 E. and Secs 6 T. 7 R. 44 E.; $1.

Nov. 6—W D. Hare et al to Hillsboro G. M. Co. , 160 acres mining ground in Sec. 31 T 6 R. 44 and Sec 36 T 6 R. 43 E.; $1.

Nov. 12—E. W. Curtis to Anna McKay,, ¼ interest in Big Chief and Sitting Bull quartz claims; $200.

Nov. 15—Mary A. Doane to Jno. Doane. ½ interest in Buckeye group quartz claims; $1.

Nov. 22, '02—Jno. Doane and wife to Wm. H. Gleason. ¼ interest in Dixie Queen quartz claim; $1.

May 13—Jas. Cunningham et al to Elton Staley, Jordan Bar placer claim; $150.

May 8—S. L. Gilmore and wife to J. M. Patterson, interest in Two Toms placer claim; $2,100.

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