

CRUCIBLE STEEL COMPANY OF AMERICA—ANOTHER OUTSTANDING MARSMAN TRADING AGENCY

Boulder Dam, Fort Peck Dam, Grand Coulee, the Tennessee Valley's Guntersville, Norris, and Joe Wheeler Dam projects, the San Jacinto Tunnel—all had Crusca Hollow Drill Steel employed 100%. In fact, by conservative estimate. Crusca supplies at least 50% of all the hollow drill steel used in America. As indicated, Crusca is a vital instrument in the excavation of dam projects, in the intensive drive of tunnel work, and the hard rock drilling of mines.

Oregon to Florida, Denver to Delaware, Crusca has penetrated its way. Universality is revealed by the variety of jobs Crusca has been able to handle—the Mecca Pass mountain job in the West, the Pennsylvania Turnpike; along the Skyline Drive in Virginia, and the Coachella Tunnels of Los Angeles' Metropolitan Water District—throughout all these areas, Crusca is a leader. For the 90.76 miles of the Colorado River Aqueduct, Crusca Hollow Drill Steel was used over 80% of the way. Both in detachable drill bit rods and in conventional steel, Crucible's product is relied upon exclusively by contractors who must meet requirements of progress and time. Where the steel must endure slow hard drilling, rapid wear, and other drilling difficulties, the high quality and durability of Crusca makes it the selection of *particular* engineers.

Hollow drill steel seems to have come to light back in 1850 as a rod or tube through the ingenuity of James Neuman of Birmingham, England. Thereafter, many a good gun barrel drill of three foot length was known.

Crucible Steel Company of America pioneered hollow drill steel production in the United States in 1911. Thirty years ago, the company's craftsmen used all their skill in perfecting drill steel to stand the hardest requirements.

This company had already made a name for its excellent solid drill steel for hand work, with brands like "Black Diamond" and "Crescent" and "Howe-Brown" entirely familiar to all miners. At that time, solid drill steel jumpers and borers—hand driven—were considered superior tools. Water was poured into the hole, and sludge removed by means of a scraper at the end of a rod. Today, the miner has a compressed air drill with Crusca Hollow Drill Steel. Rock cuttings are removed now from the drill face as fast as they are formed by blowing them out with air or flushing with a water jet. Although he may have started with a solid steel chisel and hammer, and many times struggled with a piston drill that could strike 300 blows a minute, the mining man today has his compressed air drill striking over 2000 blows per minute on Crusca Hollow Drill Steel.

Mining men and construction engineers for thirty years have been *sure* of Crusca steel. They have used it as the means of piercing 11,000 feet deep for gold, silver, copper, lead, zinc, and iron; tunneling through rock mountains; hard rock aqueduct boring; for quarries, railroads, subways, and skyscrapers. Although Crusca may appear just a piece of steel with a hole through the center, these men recognize it for the means of attaining their goal—be it water, transportation, home, or gold. Because this Crusca Hollow Drill Steel has stood the hardest test and is constantly specified by rock drillers who demand accomplishment, MARSMAN TRADING CORPORATION takes pride in being able to answer this demand and make Crusca Hollow Drill Steel available to the miner and construction contractor of the Philippines.