purities which are mechanically combined in the inter-
stices of the spongy mass. This is done by hammering,
or more usually by a machine called a squeezer, which,
as its name implies, squeezes out the scoriæ, cinder and
slag. The ball has now taken another shape, being con-
solidated into an elongated mass, of such form as to en-
able a still further compacting of its particles through
the medium of the first set of rolls, called the roughing-
rolls, to which the ball is immediately taken from the
squeezer. The iron, after being passed through these
rolls several times, becomes what is called a "puddled
bar," and in appearance looks like a very rough and
jagged-edged bar of flat iron about 15 feet long, and
some 7 × 2 inches in section. At some mills these bars
are called muck-bars. They are then cut up into short
lengths, and made up into "piles," according to the
shaped bar it is desired to make. The piles are heated
in a heating-furnace, and when at a white heat are taken
out, and passed back and forth through the finishing
rolls, from which their marketable or commercial shape
is derived. This is called best iron, and is the degree of
refinement sold by manufacturers, when simply so many
tons of iron are ordered. If made from good stock—
that is, well-selected pig-iron—such iron answers every
requirement for ordinary purposes. But for a bridge, it
is often required that this best iron should be again cut,
piled, heated, and rolled into new bars, which process,
while it does not change the quality of the iron in the
least, still further refines it, and makes it more uniform