

UNITED STATES PATENT OFFICE.

LEVERETT W. STUART, OF HAWLEY, PENNSYLVANIA, ASSIGNOR TO
GUSTAVUS AMES, OF ROCHESTER, NEW YORK.

IMPROVEMENT IN PROCESSES OF HARDENING EDGE TOOLS.

Specification forming part of Letters Patent No. **140,390**, dated July 1, 1873; application filed
June 27, 1872.

To all whom it may concern:

Be it known that I, LEVERETT W. STUART, of Hawley, in the county of Wayne and State of Pennsylvania, have invented a new Process of Hardening Edge Tools, of which the following is a specification:

The invention will first be fully described in connection with all that is necessary to a full understanding thereof, and then clearly pointed out in the claim.

After much thought and careful experiment, for the purpose of attaining some convenient way of densifying and hardening the cutting-edge of edge tools, harvester-cutters, and saw-teeth, I have discovered a process by which it may be done effectually and with little labor and cost.

This process consists in holding the previously hardened and tempered blade with the part that is to be hardened against a revolving smooth-faced metallic wheel. The wheel revolving against the metal edge indurates it

to such an extent that it will resist effectually the ordinary action of a file.

If a tool like a harvester-blade is to be operated upon, it is hardened and tempered first in the ordinary manner. The horizontal face of the edge is then held to the revolving wheel until the desired degree of hardness is obtained. On the other hand, if a saw-tooth is to be treated, I take the steel-pointed tooth, and place the outer face that takes the wear and subject it to the same induration.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

The process of hardening edge tools, by applying an edge thereof under pressure against a revolving smooth-faced metallic wheel, as described.

LEVERETT W. STUART.

Witnesses:

SOLON C. KEMON,
CHAS. A. PETTIT.