## J. Sennelle for Loon.

Nº 8,662.

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## UNITED STATES PATENT OFFICE.

JACOB SENNEFF, OF PHILADELPHIA, PENNSYLVANIA.

## METALLIC HEDDLES.

Specification of Letters Patent No. 8,662, dated January 13, 1852.

To all whom it may concern:

Be it known that I, JACOB SENNEFF, of the city and county of Philadelphia and State of Pennsylvania, have invented a new 5 and useful Improvement in the Construction of Weavers' Metallic Harness, called "Senneff's Single-Wire Cast-Eye Harness," which is described as follows, reference being had to the annexed drawing of the same, 10 making part of this specification.

The figure is a plan of one of the heddles. The dotted line represents the wire passing through the casting forming the eye.

In the use of the common wire heddles, 15 much difficulty is experienced from the threads of the warp not working freely through the harness, and the great liability of the fibers of the warp felting or working into the twist of the wires, above and 20 below the eyes. The cost of the material and the weight of the common wire harness are also objectionable—being made double and necessarily of heavier wire than is required to make my single wire harness. 25 There are other objections to the use of the thick double strand twisted wire harness, which could be named, but the above will suffice to show the importance of my invention and improvement. My improved har-30 ness is designed to remove these objections. and the nature of it consists in casting the eye A on the single wire heddle B in a novel and peculiar manner.

To make this heddle, a suitable mold of 35 the shape of the required eye should be first prepared, in which the eye is to be cast on the single wire. The wire is bent slightly at

the middle where the eye is to be cast; it is then placed in the mold and the molten metal introduced; when sufficiently cool the 40 mold is opened and the heddle removed. In this manner the heddles are made.

The molten metal may be cast over the wires in sheets or plates, and the eyes be subsequently punched from the sheets or 45 plates when the latter are sufficiently cool to admit of the punching operation.

Several separate heddles may be formed in a single mold with the eyes cast complete. The eyes may also be cast in glass or 50 other suitable material.

Owing to the friction being so much reduced by the use of my improved single wire cast eye harness, much less sizing will be required on the warp; and perhaps in 55 practice it may be entirely dispensed with.

What I claim as my invention and desire

to secure by Letters Patent is—

Casting the eye on the wire which constitutes the heddle, harness, or heald, through 60 which the warp passes, in the manner and for the purpose set forth, producing a heddle much superior to any other known or used, and which will remove many of the difficulties heretofore experienced in the use 65 of the common twisted wire heddle.

In testimony whereof I have hereunto signed my name before two subscribing witnesses.

JACOB SENNEFF.

Witnesses:

WM. T. ELLIOT, LUND WASHINGTON, Sr.