

THOMAS W. HOUCHIN.

Improvement in Vegetable-Graters.

No. 126,144.

Patented April 30, 1872.

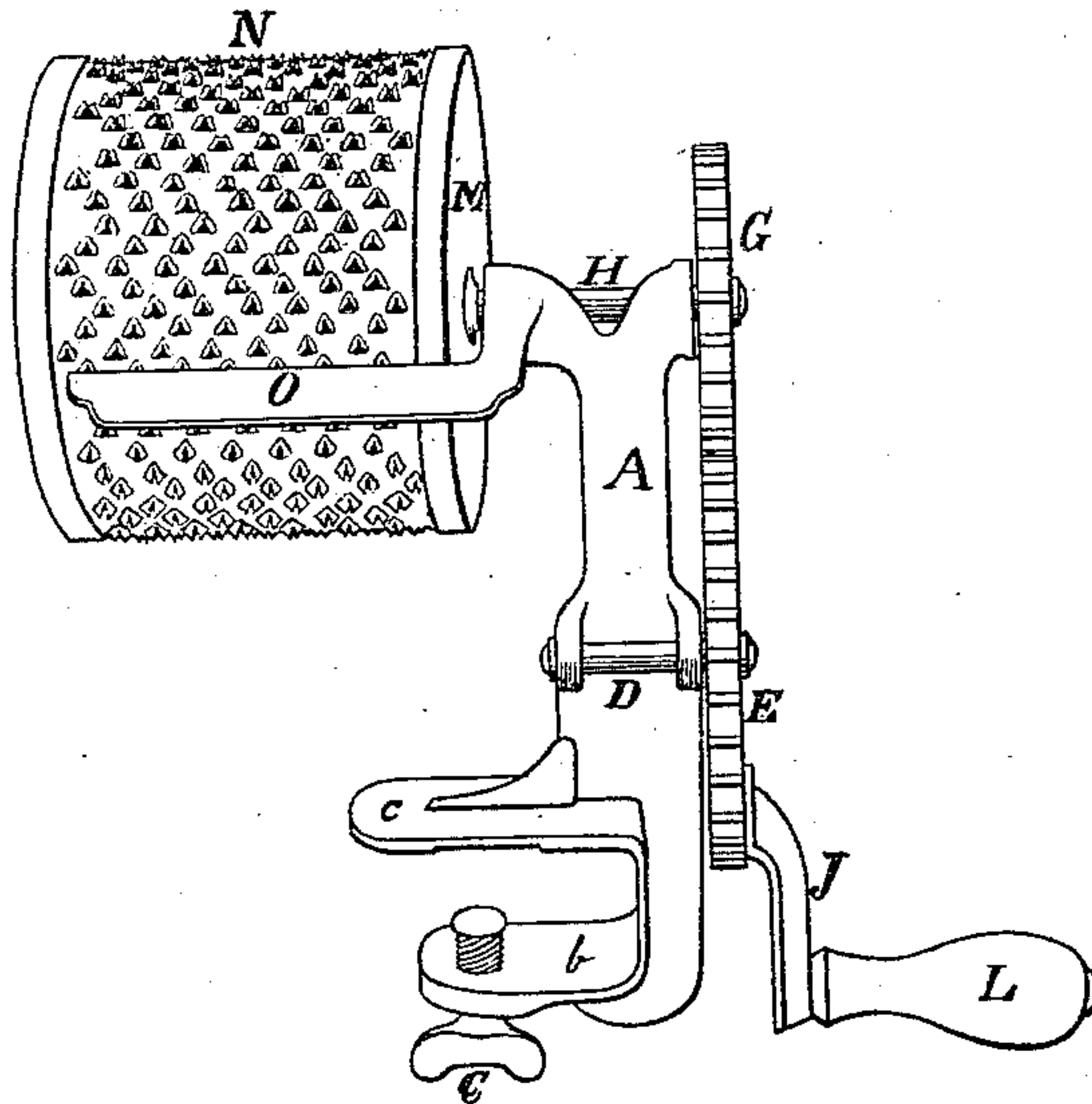


Fig. 1

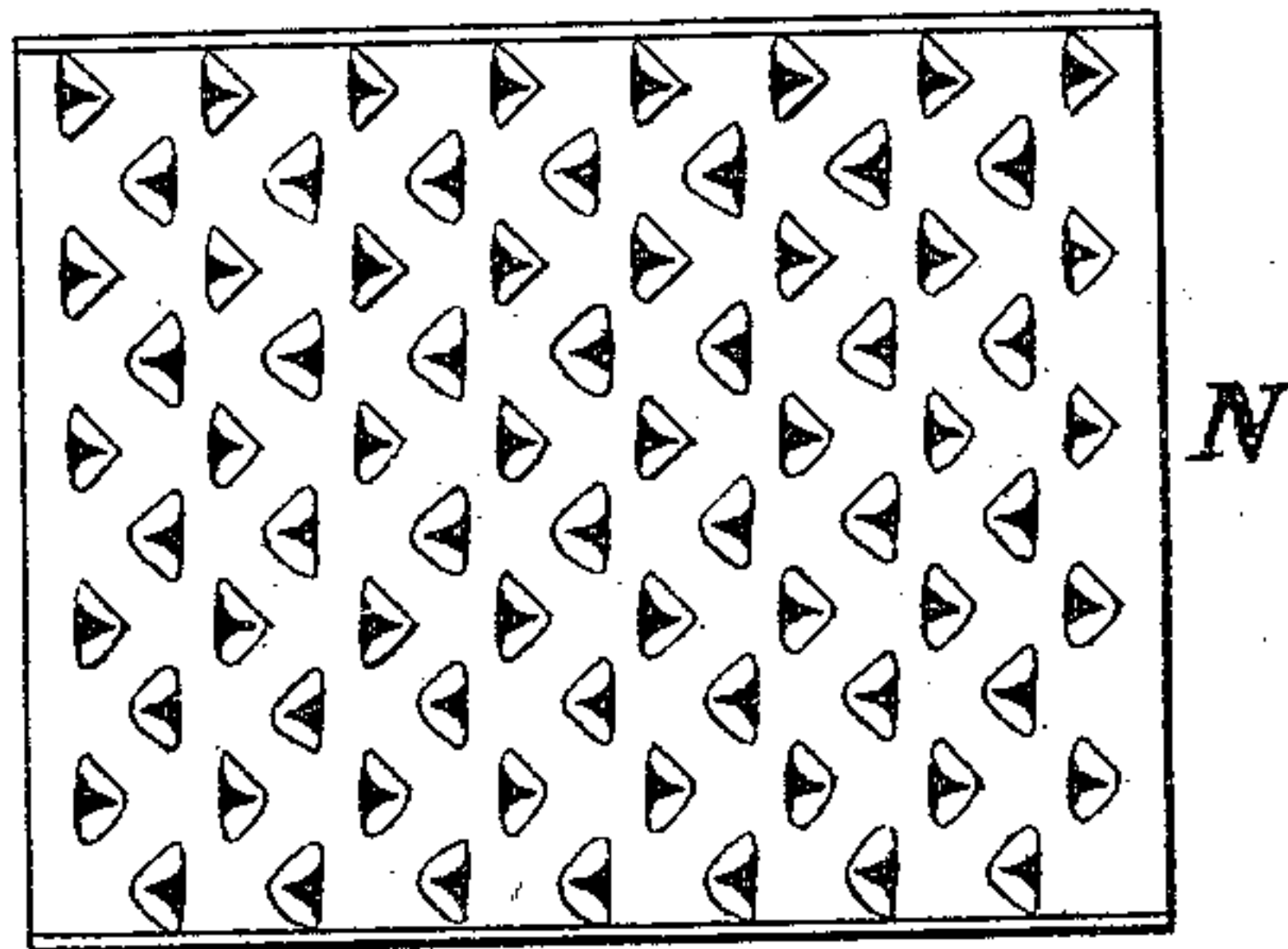


Fig. 2.

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UNITED STATES PATENT OFFICE.

THOMAS W. HOUCHIN, OF MORRISANIA, NEW YORK.

IMPROVEMENT IN VEGETABLE-GRATERS.

Specification forming part of Letters Patent No. 126,144, dated April 30, 1872.

To all whom it may concern:

Be it known that I, THOMAS W. HOUCHIN, of Morrisania, in the county of Westchester and State of New York, have invented, made, and applied to use a new and Improved Vegetable-Grater; and that the following is a full, clear, and correct description of the same, reference being had to the accompanying drawing making part of this specification and to the letters of reference marked thereon, in which—

Figure 1 is a front view of my improved vegetable-grater. Fig. 2 is a view of the grating-surface employed.

In the drawing like parts of the invention are indicated by the same letters of reference.

The nature of the present invention consists in certain improvements, as more fully hereinafter set forth, in the construction of vegetable-graters, the same being an improvement upon Letters Patent granted S. M. Wilson January 11, 1870, the object of the invention being to provide a new and novel form of grating-surface for vegetable-graters, as more fully described.

To enable those skilled in the arts to make and use my invention, I will describe the construction and operation of the same.

A shows a frame for supporting the operative parts of my improved vegetable-grater. This frame is provided with a lug, *b*, through which is passed a clamping-screw, *C*, and also with a larger or longer lug, *c*, placed a short distance above the lug *b*. *D* shows a spindle inserted in the frame *A*, in which it is free to revolve, upon one end of which is keyed a cog-wheel, *E*, gearing into a pinion, *G*, held upon the spindle *H* inserted in the frame *A*. This cog-wheel *E* has cast upon it the crank *J*, to which is attached the handle *L*. *H* shows a spindle inserted in the frame *A* above the spindle *D*, and having upon one end the pinion *G* gearing into the cog-wheel *E*, and upon its opposite end a blank wheel or collar, *M*, serving to support the grating-surface *N* of the implement. *N* shows the grating-surface, formed generally of tin or any metal that can be readily punched or perforated, and made, in the present instance, circular and attached to the blank wheel or collar *M*.

As the present invention consists almost en-

tirely in an improved form of grating-surface applicable to vegetable-graters, I will now describe it as closely and minutely as possible. As already stated, the same is formed of tin or any metal that can be easily punched or perforated. The same is fed into a punching-machine, and has formed upon it a series of double teeth, as shown in Fig. 2 of the drawing. These teeth alternate, so that the rows of teeth placed or formed in the grating-surface do not fall in line with each other, or, more correctly speaking, a row of teeth is punched, and the blank is then shifted in the machine so that the next row of teeth punched shall fall between the row of teeth previously punched; and this operation is repeated until the whole blank has been perforated. The teeth punched up are double teeth, so that two cutting-edges are produced to be brought into contact with the vegetables to be grated, with a half-diamond shaped opening between them, and differ from the ordinary grating-surface usually employed in that no burr or projection is left in front of the two side-cutting teeth, but an open throat is formed there, through which the material operated upon passes to the interior of the grater in the form of strips or shavings, instead of falling from its exterior surface in the form of grains or dust, the effect produced by them being rather the effect that would be produced by a chisel or gouge than a rasp.

The advantage arising from the use of such a form of grating-surface is that the vegetable is more thoroughly disintegrated and the space for the fibers or particles of the same to pass through much greater than in the old form of grating-surface, which is more easily clogged or filled up.

A rest, *O*, is attached to the frame *A* directly in front of the grating-surface, upon which the vegetable to be grated shall rest or have a bearing as it is fed to the implement.

Such being the construction, the operation may be thus described: The grater may be secured to a lath or board by passing the lug *c* sufficiently over the same that the clamp-screw *C* may have a bearing upon the under or bottom side of the same. The vegetable to be grated may be supplied to the grater by hand, the same (the vegetable) resting upon the rest *O*, while the handle *L* may be turned by the

other hand of the operator. As this handle is turned motion is imparted to the cog-wheel E and through the pinion G to the grating-surface N, and as the same revolves and the vegetable is fed to the same the vegetable will be rapidly and thoroughly grated.

I am acquainted with the grater patented by Wehele and Wittlinger March 21, 1871, and hereby disclaim the construction described and shown in that patent.

Having now set forth my invention, what I claim as new is—

1. The cutting-surface N, formed of perfora-

tions, each having two lateral triangular cutters or teeth with an open throat in front, as described and represented, and for the purpose stated.

2. The combination of a grating-surface, N, constructed as described, with the rest O, frame A, pinion G, cog-wheel E, and spindles D and H, as and for the purposes described.

THOS. W. HOUCHIN.

In presence of—

A. SIDNEY DOANE,
WM. HASTINGS.