

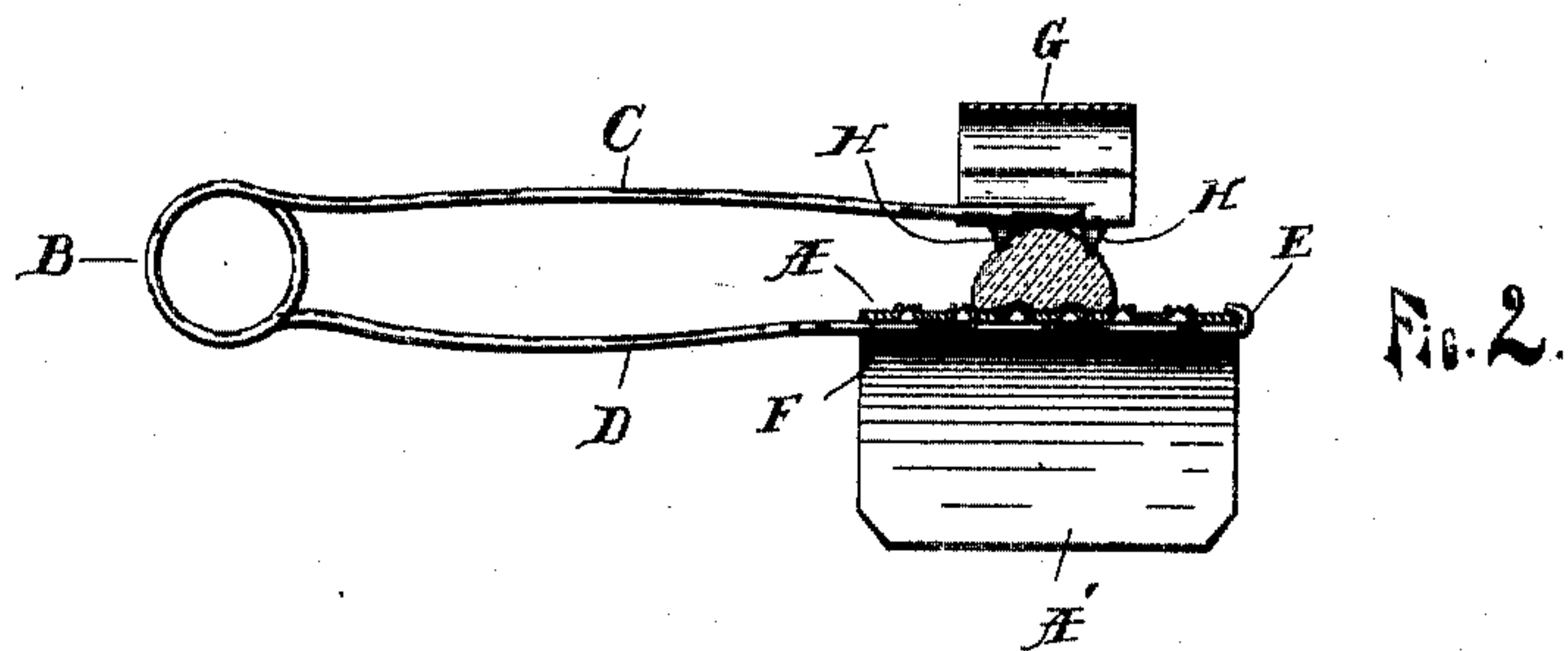
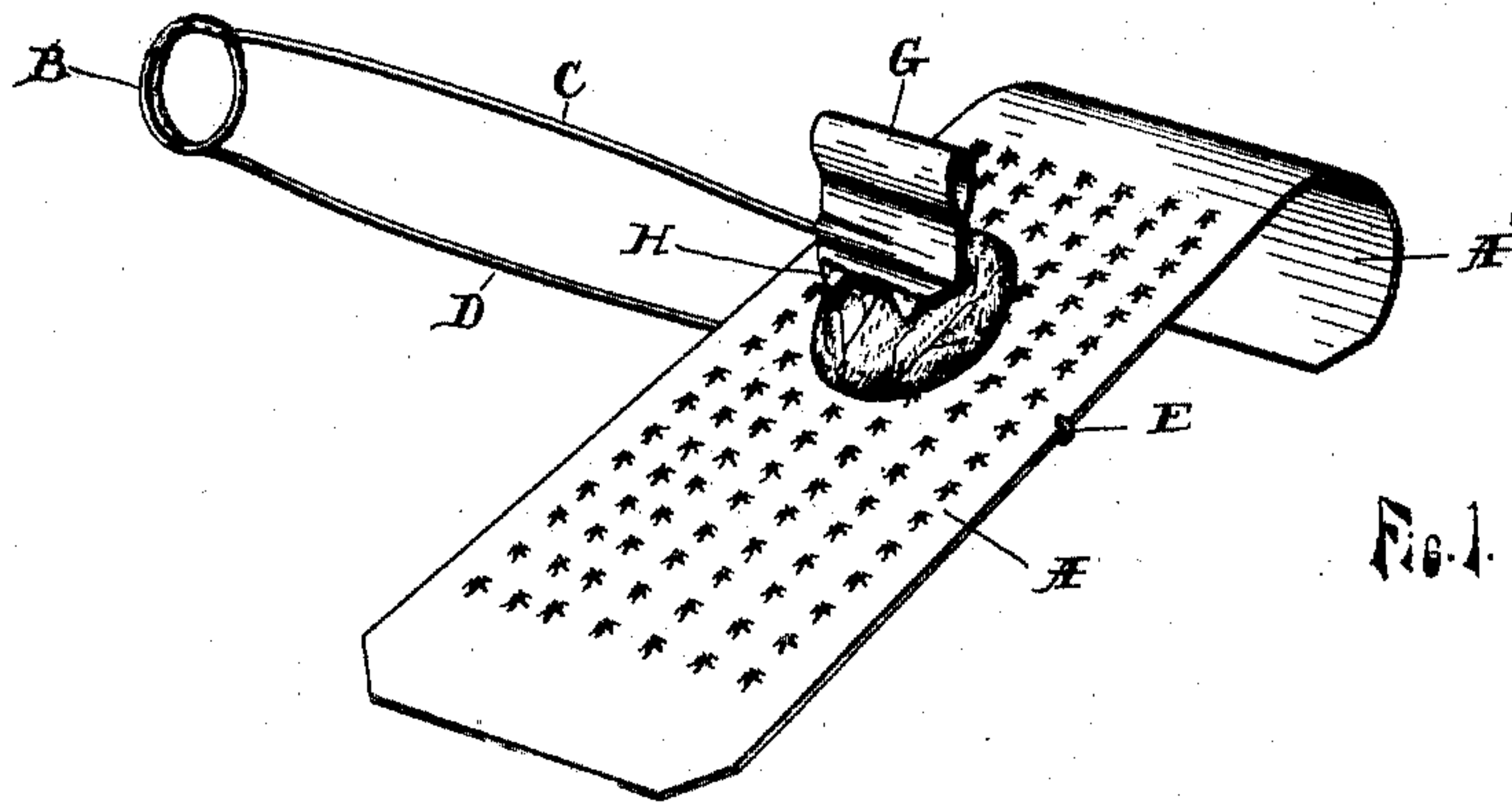
No. 775,973.

PATENTED NOV. 29, 1904.

C. B. HIBBARD.
GRATER.

APPLICATION FILED NOV. 4, 1903.

NO MODEL.



WITNESSES:

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UNITED STATES PATENT OFFICE.

CHARLES B. HIBBARD, OF GRAND RAPIDS, MICHIGAN.

GRATER.

SPECIFICATION forming part of Letters Patent No. 775,973, dated November 29, 1904.

Application filed November 4, 1903. Serial No. 179,781. (No model.)

To all whom it may concern:

Be it known that I, CHARLES B. HIBBARD, a citizen of the United States, residing at Grand Rapids, in the county of Kent and State of Michigan, have invented certain new and useful Improvements in Graters; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it ap-
 10 pertains to make and use the same.

My invention relates to improvements in graters adapted to grate nutmegs, fruits, vegetables, &c.; and its object is to provide an efficient device that can be cheaply constructed
 15 and easily cleaned.

My device consists, essentially, of a flat plate having a suitable abrading-surface, a flexible arm having one end above the plate and adapted to yield and traverse the same and
 20 also to yieldingly press the article to be operated upon in contact with said plate and provided with spurs to engage and adhere to said article, as will more fully appear by reference to the accompanying drawings, in which—

25 Figure 1 is a perspective of a device embodying my invention, and Fig. 2 a transverse section of the same.

Like letters refer to like parts in both of the figures.

30 A represents a plate of tin or other suitable material and suitably perforated or otherwise provided with an abrading-surface. Said plate is preferably an oblong parallelogram and is bent in a curved or semicylindrical form at one end to form a suitable handhold, as at
 35 A'. A suitable piece of spring-wire is formed with a coil B near the middle and its respective ends extended substantially parallel to each other, forming arms C D, which tend to yield-
 40 ingly approach each other and press the article against the plate and also to yield in the direction of the plane of the plate to traverse the article on the plate. These arms are arranged in planes substantially parallel to
 45 that of the plate A and extend laterally therefrom, and the arm D extends beneath the said plate and transversely across the same, near the middle thereof, and is attached thereto by folding the end of the arm D around the edge
 50 of the plate, as at E, and by a clip F at the

other side of the plate and may be further secured thereto by soldering. The arm C terminates over the plate A and near the middle thereof and is provided with a handhold and spurs consisting, preferably, of a suit-
 55 able strip of sheet metal folded in a loop near the middle, thence extended downward toward the plate A and embracing the end of the arm C, to which arm it is soldered or otherwise secured, and thence diverging op-
 60 positively and terminating at each end in downwardly-projecting spurs H to engage the article to be grated.

From the foregoing description the operation of my device may be readily understood.
 65 The article to be grated is placed between the end of the arm C and the plate A, with the spurs H engaging said article and adhering thereto and the arm C pressing it in contact with the plate A. By grasping the loop G
 70 with one hand and the plate at A' with the other hand the arm C may be vibrated laterally and its free end readily traversed to and fro over the plate A, carrying the said article with it
 75 and subjecting it to the abrading action of the roughened surface of the plate A. A small size for grating nutmegs is shown; but it is evident that larger sizes could be readily made that would be well adapted to grating
 80 fruits, vegetables, &c.

The construction shown is very cheaply and easily made and consists of parts not likely to get out of order, and all of the parts are readily accessible for cleaning after use, which
 85 latter is especially important in devices for grating fruit or vegetables.

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

1. The combination of a plate having an
 90 abrading-surface, two substantially parallel arms rigidly attached to each other at one end, and at the other end one arm extending beneath the plate and rigidly attached thereto, and the other arm extending above the plate
 95 and provided with means for engaging a nutmeg, and also being flexible both in the plane of the plate and vertically thereto.

2. The combination of a plate having an
 100 abrading-surface, an arm attached to said plate

and extending laterally therefrom and substantially in the same plane of the plate, an arm attached at its outer end to the outer end of the first-named arm and flexible both in the
5 plane of the plate and vertically thereto having its other end normally near the middle of the abrading portion of said plate, and spurs on the end of said arm which project toward the plate, substantially as described.

10 3. The combination of an oblong plate having an abrading-surface and a semicylindrical bend, a flexible wire having a coil near the middle and substantially parallel arms, one of
15 said arms attached to the plate and the other of said arms, terminating above said plate and near the middle thereof, and a handhold and spurs attached to the end of the last-named arm, substantially as described.

20 4. The combination of a plate having an abrading-surface and a semicylindrical portion, a flexible wire having a coil near its middle and substantially parallel arms, one of said arms being attached to said plate and projecting therefrom in substantially the plane of the

plate and the other of said arms terminating 25 above and near the middle of the abrading-surface, and a strip of metal folded near the middle forming a loop, thence extending toward the plate and embracing the last-named arm and secured thereto, and thence extended 30 oppositely and terminating in spurs projecting toward the plate, substantially as described.

5. The combination of a plate having an abrading-surface, a flexible wire bent near the middle in a coil, and having substantially parallel 35 arms, one of said arms being rigidly attached to said plate and having a hook engaging the edge of the plate, a loop secured to the plate and embracing the said arm, and means attached to the other arm for engaging 40 and moving a nutmeg or other article over the surface of the plate.

In testimony whereof I affix my signature in presence of two witnesses.

CHARLES B. HIBBARD.

Witnesses:

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