

(No Model.)

3 Sheets—Sheet 1.

G. LISPENARD.

PICKER STEM GUARD FOR COTTON HARVESTERS.

No. 545,431.

Patented Aug. 27, 1895.

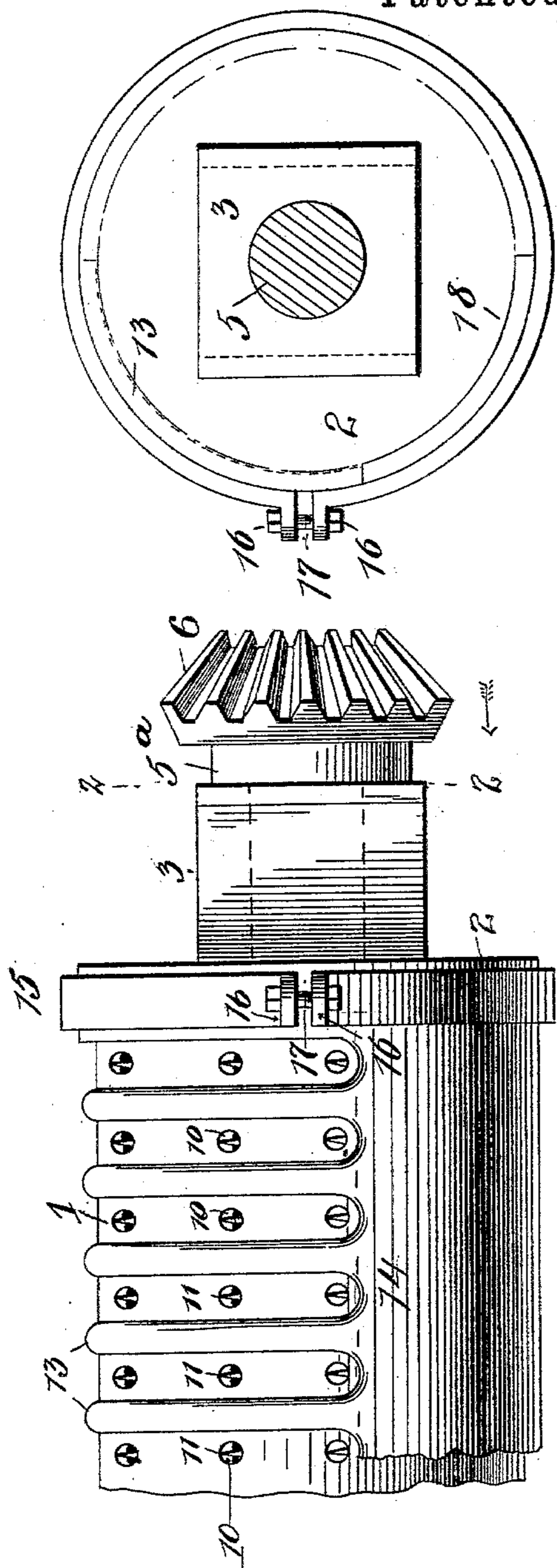


Fig. 2.

Fig. 1.

WITNESSES:

C. W. Benjamin
William Jacobson.

INVENTOR
George Lisperard.

BY Joseph L. Levy

ATTORNEY

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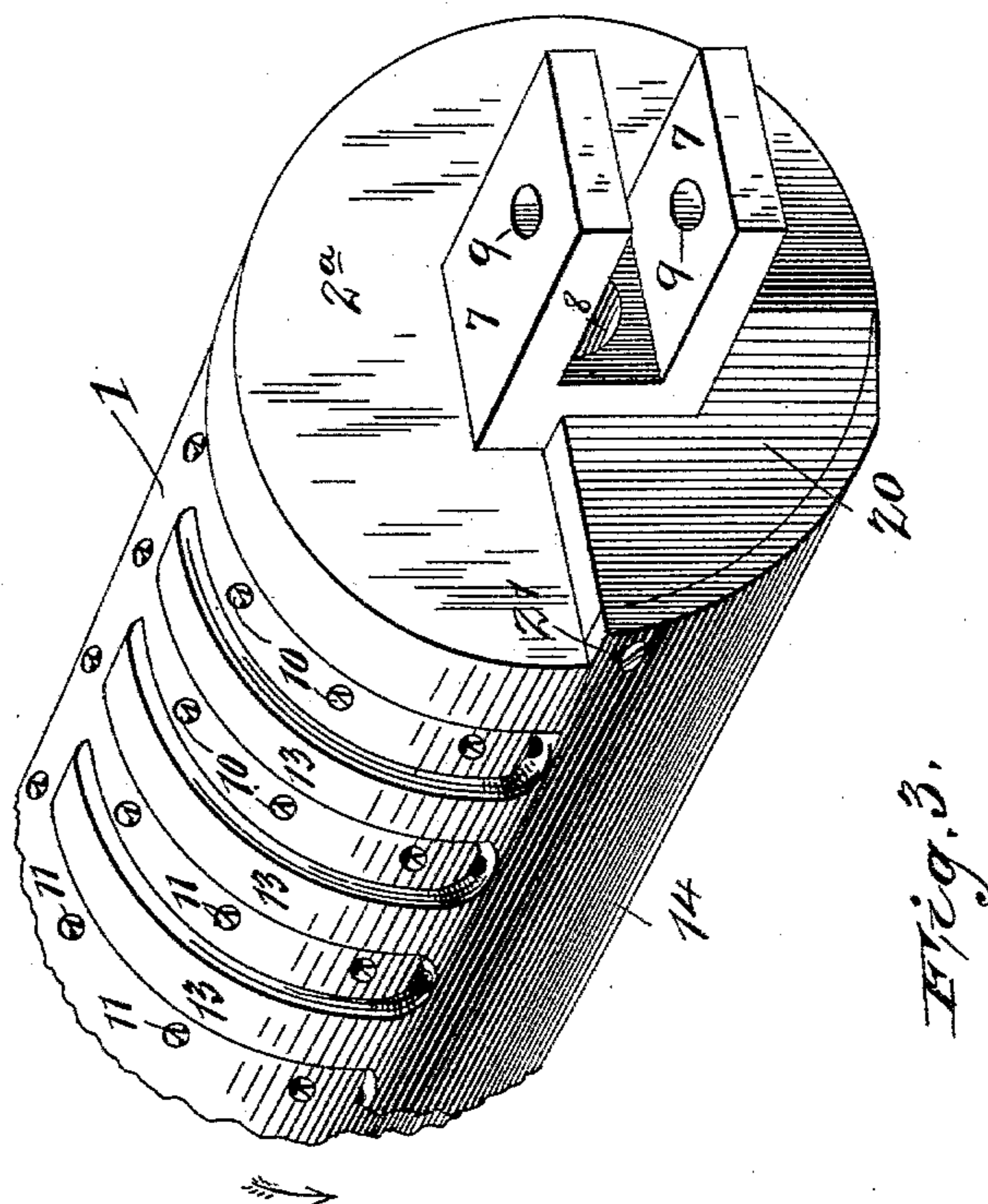
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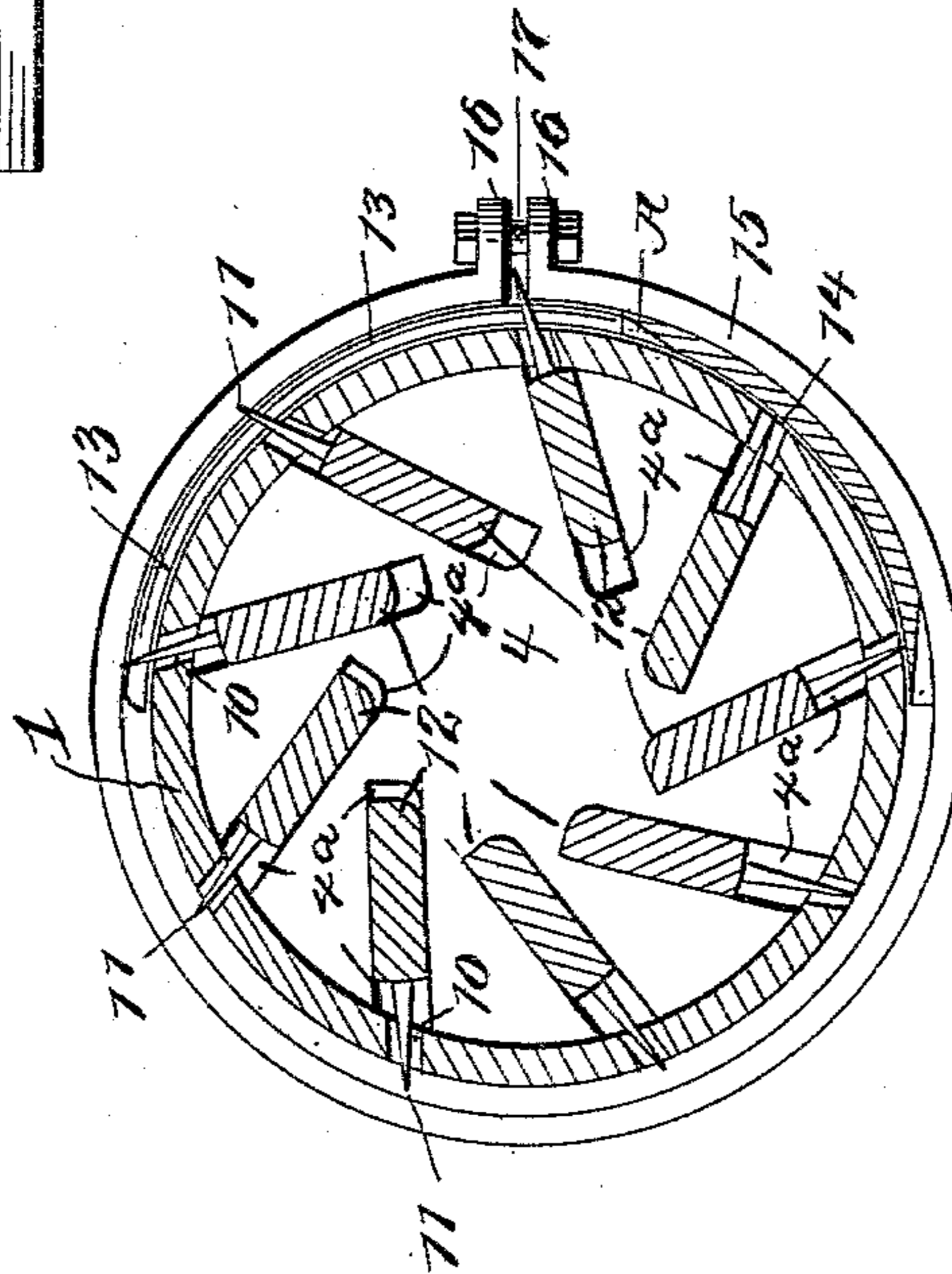
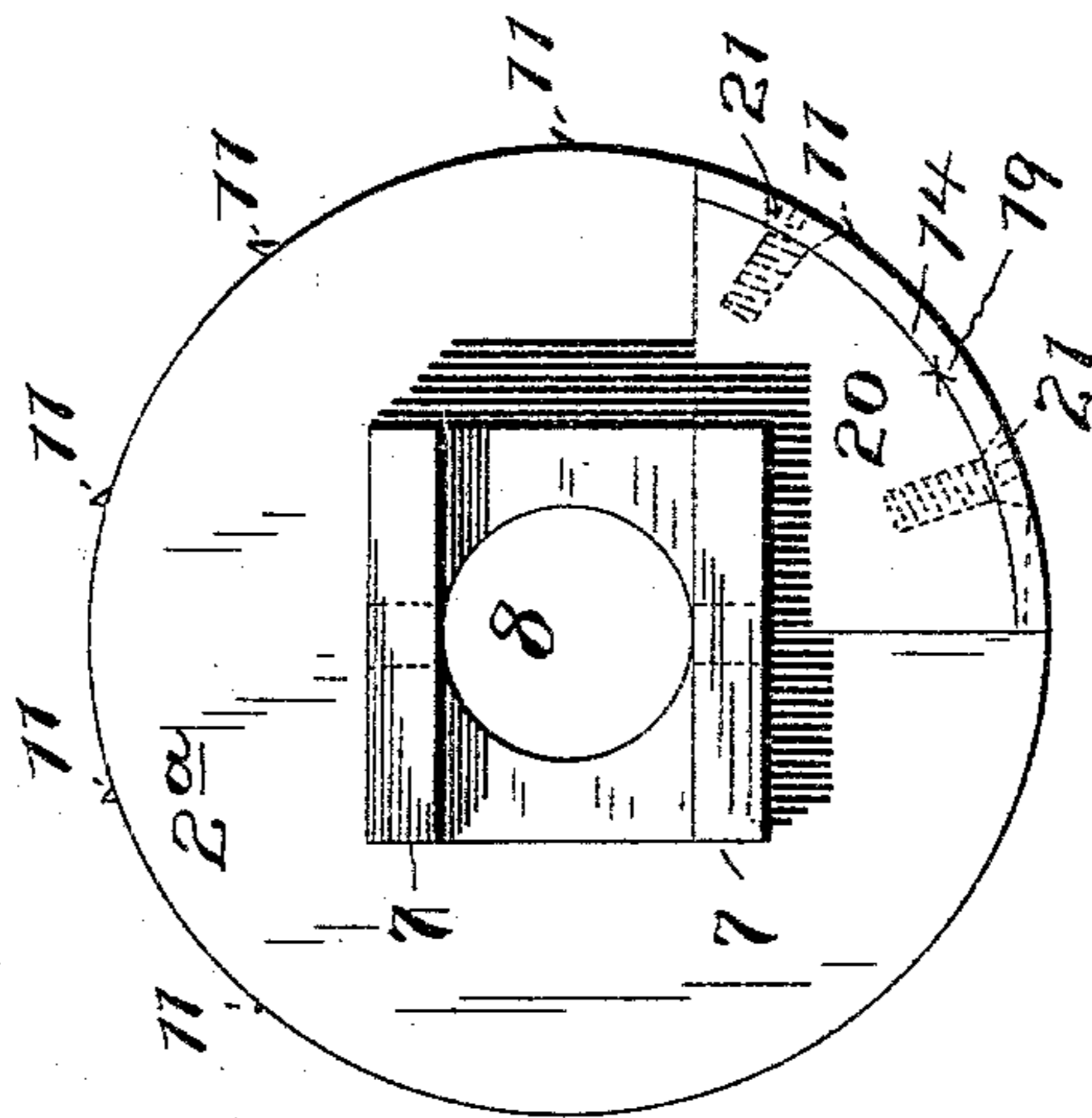
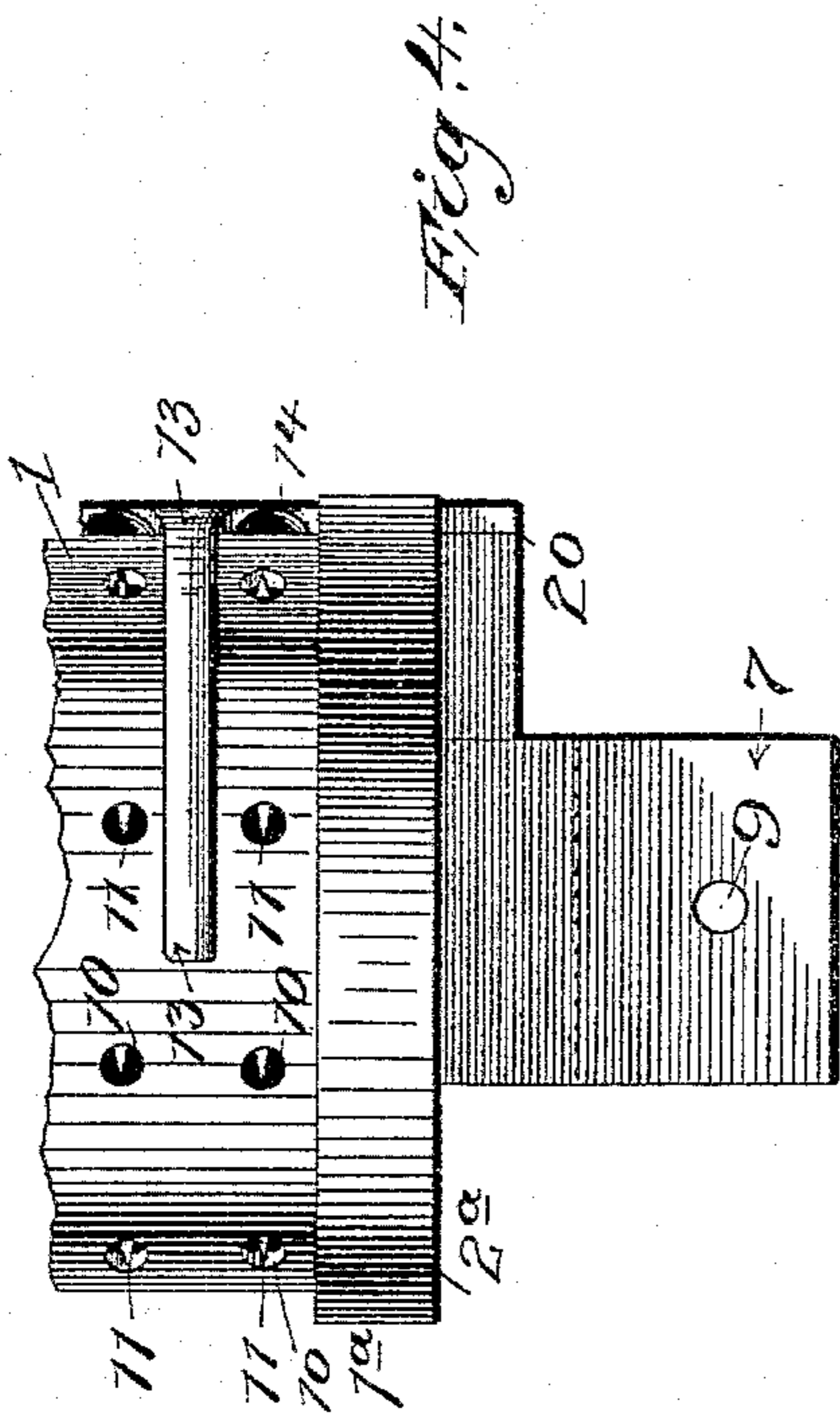
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ATTORNEY

UNITED STATES PATENT OFFICE.

GEORGE LISPENARD, OF BROOKLYN, NEW YORK.

PICKER-STEM GUARD FOR COTTON-HARVESTERS.

SPECIFICATION forming part of Letters Patent No. 545,431, dated August 27, 1895.

Application filed September 27, 1894. Serial No. 524,231. (No model.)

To all whom it may concern:

Be it known that I, GEORGE LISPENARD, a citizen of the United States, residing at Brooklyn, in the county of Kings and State of New York, have made certain new and useful Improvements in Picker-Stem Guards for Cotton-Harvesters, of which the following is a specification.

My invention relates more particularly to the class of cotton-harvesters in which rotative stems or cylinders having hackle fingers or pins are used to pick the cotton from the bolls on the bushes.

The object of this invention more particularly is to provide improved means for protecting the hackle pins or fingers from injury while they are picking the cotton, as well as to provide means for preventing leaves, bolls, &c., from being carried along with the cotton.

The invention consists in a rotative cylinder or stem provided with hackle-fingers, combined with stationary guards of novel construction located on the exterior of said cylinders and lying between the circular rows of said hackle-fingers.

The invention further consists in the novel details of improvement and the combinations of parts, that will be more fully hereinafter set forth, and then pointed out in the claims.

Reference is to be had to the accompanying drawings, forming part thereof, wherein—

Figure 1 is a detail side elevation of the upper portion of a picker cylinder or stem, showing my improved hackle-protectors in position on said cylinder or stem. Fig. 2 is a cross-sectional view on the plane of the line 2 2 in Fig. 1, looking in the direction of the arrow. Fig. 3 is a perspective view of the lower portion of the picker cylinder or stem, showing the manner of securing the hackle-protectors at that part. Fig. 4 is a detail side view thereof. Fig. 5 is an end view thereof, and Fig. 6 is cross-sectional view of the cylinder and hackle-protectors.

Referring now to the accompanying drawings, in which similar numerals of reference indicate corresponding parts in the several views, the numeral 1 indicates rotative picker cylinders or stems, which may be supported in the frame of a cotton-harvester such as shown in my patent, No. 517,050, dated March

27, 1894, or in my application, Serial No. 481,852, filed July 29, 1893.

In the example shown the ends of the cylinder or stem 1 are rotatively supported as follows: At the upper end the cylinder 1 is provided with a head 2, having a rim or flange 1^a, that may overlap the end of the cylinder, within which the latter may rotate. The cylinder-head 2 is shown provided with a shank 3, shown of square cross-section to enable it to be suitably held, which may be done as shown in my above-mentioned application, Serial No. 481,852. The cylinder 1 at the upper end has a disk 4, to which a spindle or shaft 5 is connected, which passes through and is journaled in the shank 3 and carries at its outer end a bevel-wheel 6, said spindle having a shoulder 5^a. (See Fig. 1.) At the opposite or lower end of the cylinder 1 is a head 2^a, having a flange 1^a and a disk 4, substantially corresponding to the head 2 and disk 4 at the upper end of the cylinder. The head 2^a is also provided with a forked extension or shank 7, the spindle 8 at the lower end of the cylinder being provided in the head 2^a. The shank 7 is shown bifurcated and provided with apertures 9, whereby said shank may be suitably supported and held, the arrangement shown being adapted for use in the frame of the harvester shown in my application, Serial No. 481,852, above mentioned. The cylinder 1 is provided with a series of apertures 10, through which hackle fingers or pins 11 are adapted to project. The hackle-pins are carried by hackle-bars 12, (see Fig. 6,) that are supported in slots 4^a in the disks 4, (see Patent No. 517,050,) the hackle-bars 12 extending longitudinally of the cylinder 1 and carrying any desired number of hackle fingers or pins 11 to project through apertures 10 in cylinder 1. The hackle-pins are to pass in and out through the apertures 10 in the cylinder 1 as the latter rotates.

An arrangement for moving the hackle-bars to project the hackle-pins is shown in my patent, No. 517,050, to which cross-reference is made, the same forming no part of my present invention. The arrangement is such that the hackle-pins will project from the side of the cylinder 1 that passes along the cotton-bush to engage the ripe cotton, and they will

be withdrawn within the cylinder as they are moved from the cotton-bush to release the cotton, as set forth in said application.

For the purpose of protecting the hackle-pins 11 from injury and to further prevent foreign substances from being carried into the picked cotton, I place guards 13 upon the cylinder 1, between the circular rows of hackle-pins 11, as shown. The guards 13 project from the surface of the cylinder 1 such a distance as to prevent sticks, &c., from lodging between the projecting hackle-pins 11, and the outer surfaces of said guards are preferably rounded, as shown, to let the soft cotton lie between them. The guards 13 are shown passing partly around the cylinder 1 in the form of curved fingers. These guards 13 are shown extending from a bar or plate 14, which is shown in the form of a curved plate concentric with the cylinder 1. These fingers are shown integral with the bar or plate 14. The bar or plate 14 is shown connected with the cylinder-head 2 by a band or strip 15, that encircles said head and is provided with apertured lugs 16, that receive a clamping bolt or screw 17. The end of the bar or plate 14 is shown seated in a recess 18 in the periphery of the head 2, (see Fig. 2,) whereby it is held from lateral movement, the band 15 passing over it. The plate or support 14 at the opposite end of the cylinder 1 is shown seated in a recess 19 in the periphery of the head 2^a and also resting against a block 20, cast on said head, screws 21 holding said support or plate upon said head.

By the foregoing means the surface of the plate or support 14 is brought about flush with the periphery of heads 2 and 2^a. By this means also the support or plate 14 and the guards 13 can be held at the proper distance from the cylinder 1 to allow a clearance or space between them to permit free motion of the cylinder, and thus allow for wear on the parts, as well as to give the fingers 13 a spring tendency.

On the under or inner side of the plate 14,

adjacent to its junction with the fingers 13, is a recess A between each pair of adjacent fingers 13, (see Fig. 6,) which will give a clearance for the fingers or hackles 11 as they begin to advance through the apertures 10 in the cylinder 1, and, further, to prevent injury to the hackle-pins 11 should the support or plate 14 for any reason become slightly displaced.

It will be observed that the fingers or guards 13 are located at that part of the cylinder 1 where the hackles 11 are projected outwardly on the side where the hackles engage the cotton.

Having now described my invention, what I claim is—

1. In a cotton harvester, the combination of a cylinder or stem having heads at its ends and hackle fingers or pins to project from said cylinder, with a curved plate or bar extending along said cylinder, and having projecting guards or fingers, a band passing around one of said heads and over one end of said plate or bar, means for clamping said band upon the said head to hold said plate or bar, and means for securing said plate or bar to the opposite head, substantially as described.

2. In a cotton harvester, the combination of a rotative cylinder or stem having peripheral apertures and hackle fingers or pins adapted to be projected through said apertures, with a curved plate or bar extending along said cylinder or stem and having a groove or recess A to permit free passage of said hackle fingers or pins, and guards or fingers extending from said plate and lying over said cylinder, said cylinder and guards having a space between them to permit free rotation of the cylinder, substantially as described.

Signed at the city, county, and State of New York this 5th day of April, 1894.

GEORGE LISPENARD.

Witnesses:

JOSEPH H. HAYES,
WM. JACOBSEN.