

*A. D. Hoffman,
Harness Machine.*

N^o 55860.

Patented June 26, 1866.

Fig. 4.

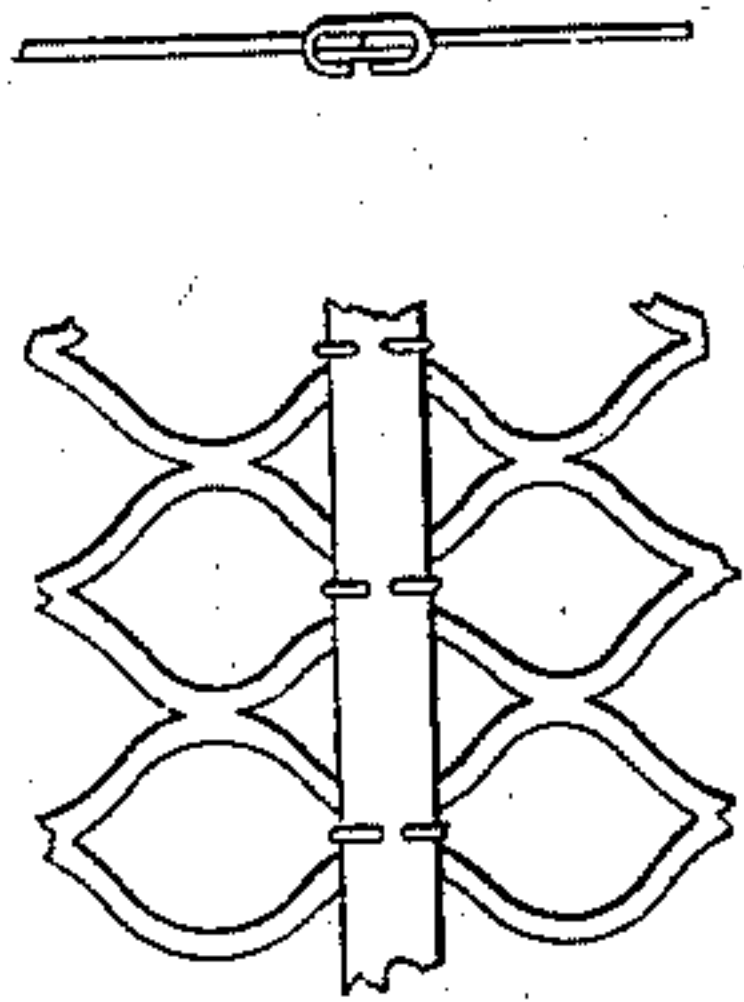


Fig. 2.

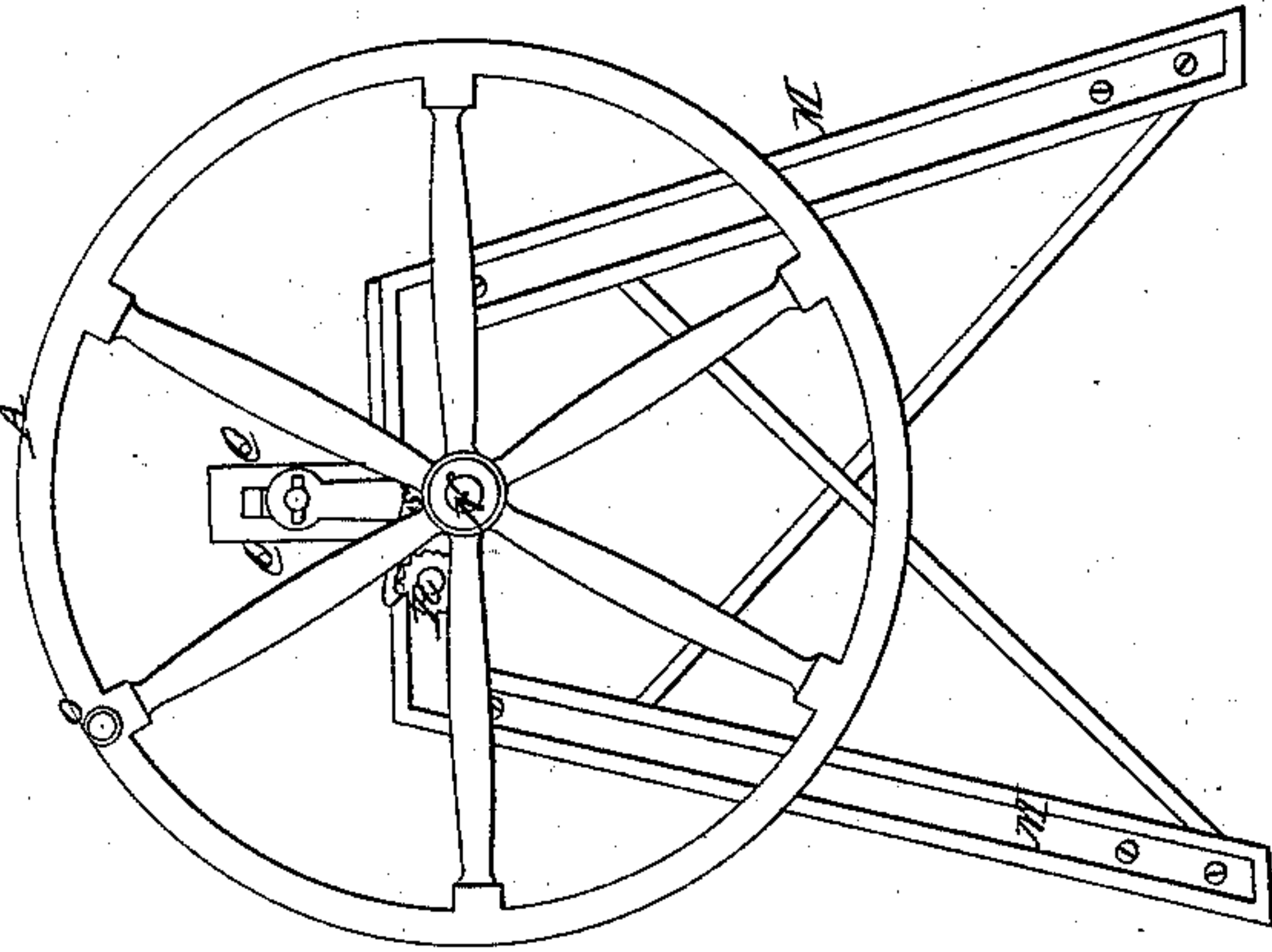


Fig. 3.

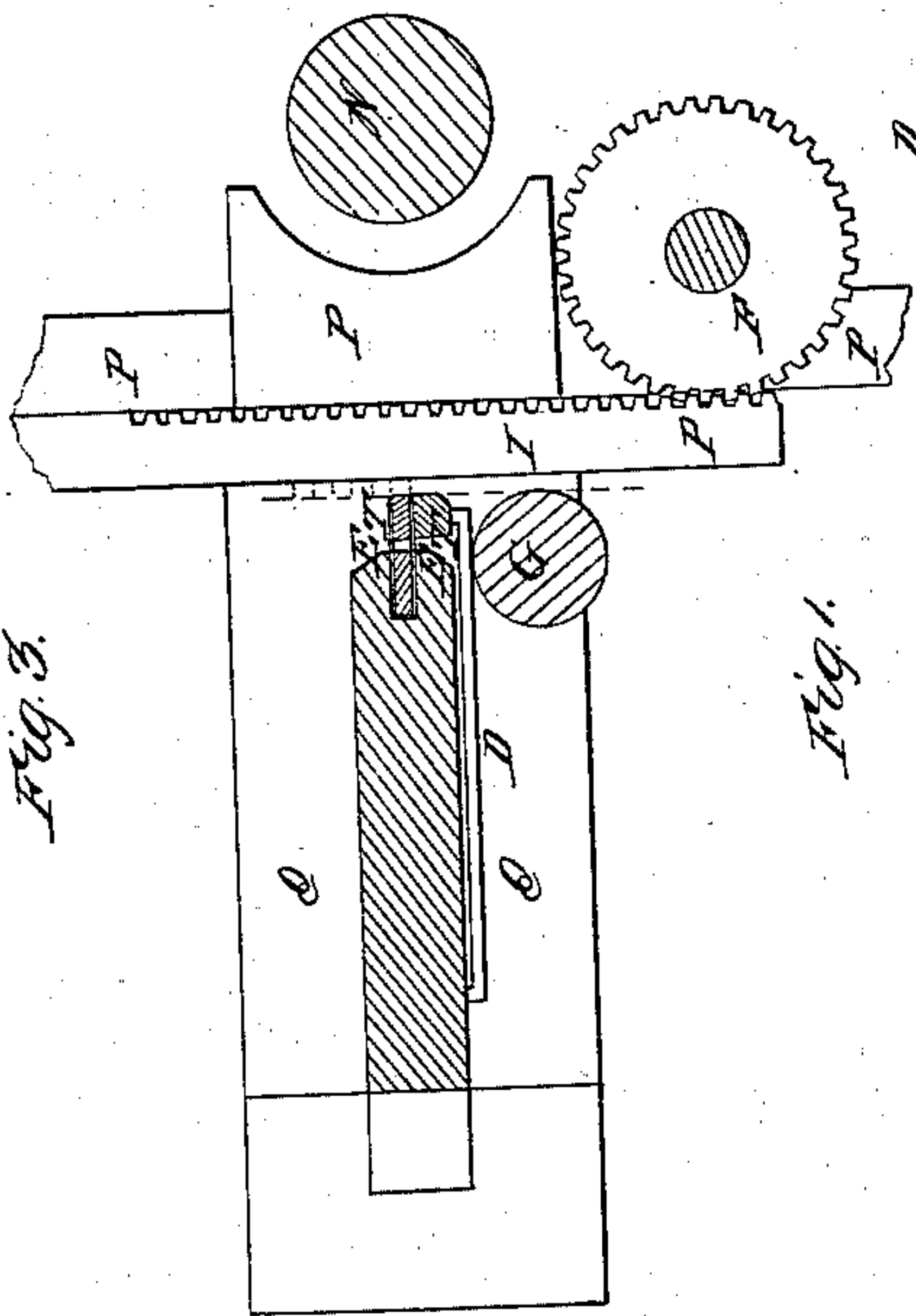
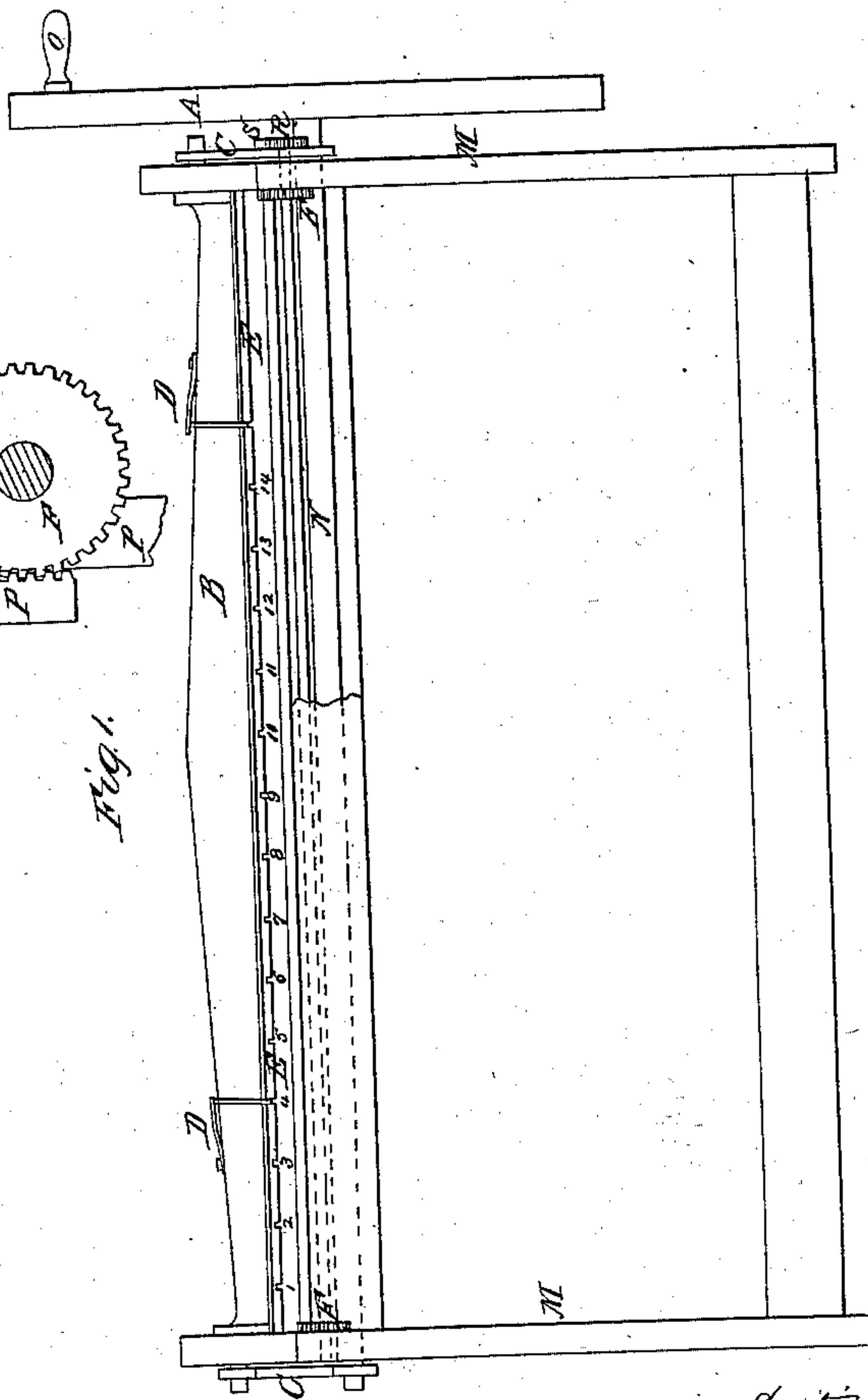


Fig. 1.



*Witnesses:
Wm. A. Amood
Wm. H. Patten*

*Inventor:
Austin D. Hoffman*

UNITED STATES PATENT OFFICE.

AUSTIN D. HOFFMAN, OF DETROIT, MICHIGAN.

IMPROVED MACHINE FOR CUTTING FLY-NETS.

Specification forming part of Letters Patent No. 55,860, dated June 26, 1866.

To all whom it may concern:

Be it known that I, AUSTIN D. HOFFMAN, of Detroit, in the county of Wayne and State of Michigan, have made a new and useful Improved Machine for Cutting Leather for Fly-Nets; and I do hereby declare the following to be a full, clear, and exact description of the nature, construction, and operation of the same, sufficient to enable one skilled in the art to which it is allied to make and use the same, reference being had to the accompanying drawings, which are made part of this specification, and in which—

Figure 1 is a side elevation of the machine. Fig. 2 is an end elevation. Fig. 3 is a transverse vertical section on an enlarged scale.

The machine has a horizontal bed, on which a cutting-board carrying the leather is intermittently fed underneath a pair of knives with alternate cutting-edges and spaces, by which slits of the required length and interval are so cut that when the leather is stretched and the slits expanded into openings a reticulated open-work of leather is produced.

In the drawings, M is the frame of the machine; N, the main shaft; O, the handle on the fly-wheel A, by which it is revolved. The bed of the machine indicated by P P P.

Journalled in the frame is a shaft carrying pinions F F, which actuate the cutting-board I by means of the racks on its under surface.

B is a sash which rises and falls in the vertical guides Q, being actuated by the links C C, whose lower ends are eccentrically journalled to the main shaft N, so that as the latter revolves it alternately raises and depresses the sash B, whose lower edge is provided with two or more knives, which cut the slits in the leather as it passes beneath them.

The knives are arranged at a specified distance apart—say one-eighth of an inch—and have a series of notches in them.

The slits made by the two knives are not opposite to each other, but break joint, so that the middle of each slit is opposite to the intervals of the slits on each side, giving a result when expanded as shown in the openings in Fig. 4.

The notches in the knives, which destroy the continuity of their edges, are two or three inches apart, according to the size of opening required.

A piece of leather four feet long, eleven inches broad at one end, and seven inches at the other is laid upon the cutting-board I, which is fed by consecutive impulse one-fourth

of an inch at a stroke, passing a pair of guillotine-knives, which are adjusted one-eighth of an inch apart, and used in the intervals of the feed a distance of one-half inch by an eccentric at each end of the revolving shaft N under the table.

The cutting-board is fed by two pinions, F F, on a shaft which is rotated by a ratchet-wheel, R, and pawl S, the pawl being actuated intermittently by the suspended link c, to which the said pawl is attached, the said link vibrating upon its upper journal-bearing on the end of the sash, and at its lower end is moved by its eccentric journal on the shaft N.

The leather is smoothed by the roller G before it enters the throat, and as the sash descends the block T comes in contact with the leather to hold it, and the knives then further descend into and cut the leather, while the block T remains stationary, elevating the springs D and D by means of the uprights.

As the sash ascends the knives lift out of the slits they have made in the leather, and the latter is held down by the blocks T under the influence of the springs, so withdrawing the leather from contact with the knives; then knives and block rise together, permitting the leather to be fed by the next impulse upon the cutting-board I.

The block T is partially between the knives and partially outside, and the two portions are connected by pins which traverse slots in that knife which divides them.

I disclaim the form and construction of the knife-edges.

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

1. The combination of two or more guillotine-knives with an intermittently-moving cutting-board for carrying the leather, which moves in a direction transverse to the length of the knives.

2. The combination, with the said guillotine-knives, of the spring-block T, arranged substantially as described, for detaching the leather from the knives.

3. In combination with a pair of guillotine-knives, a vertically-moving strip between the blades to disengage the leather therefrom.

AUSTIN D. HOFFMAN.

Witnesses:

W. F. HALL,

EDWARD H. KNIGHT.