

G. ERKSON.

Plow-Clevis.

No. 7,651.

Patented Sept 17, 1850.

Fig. 1.

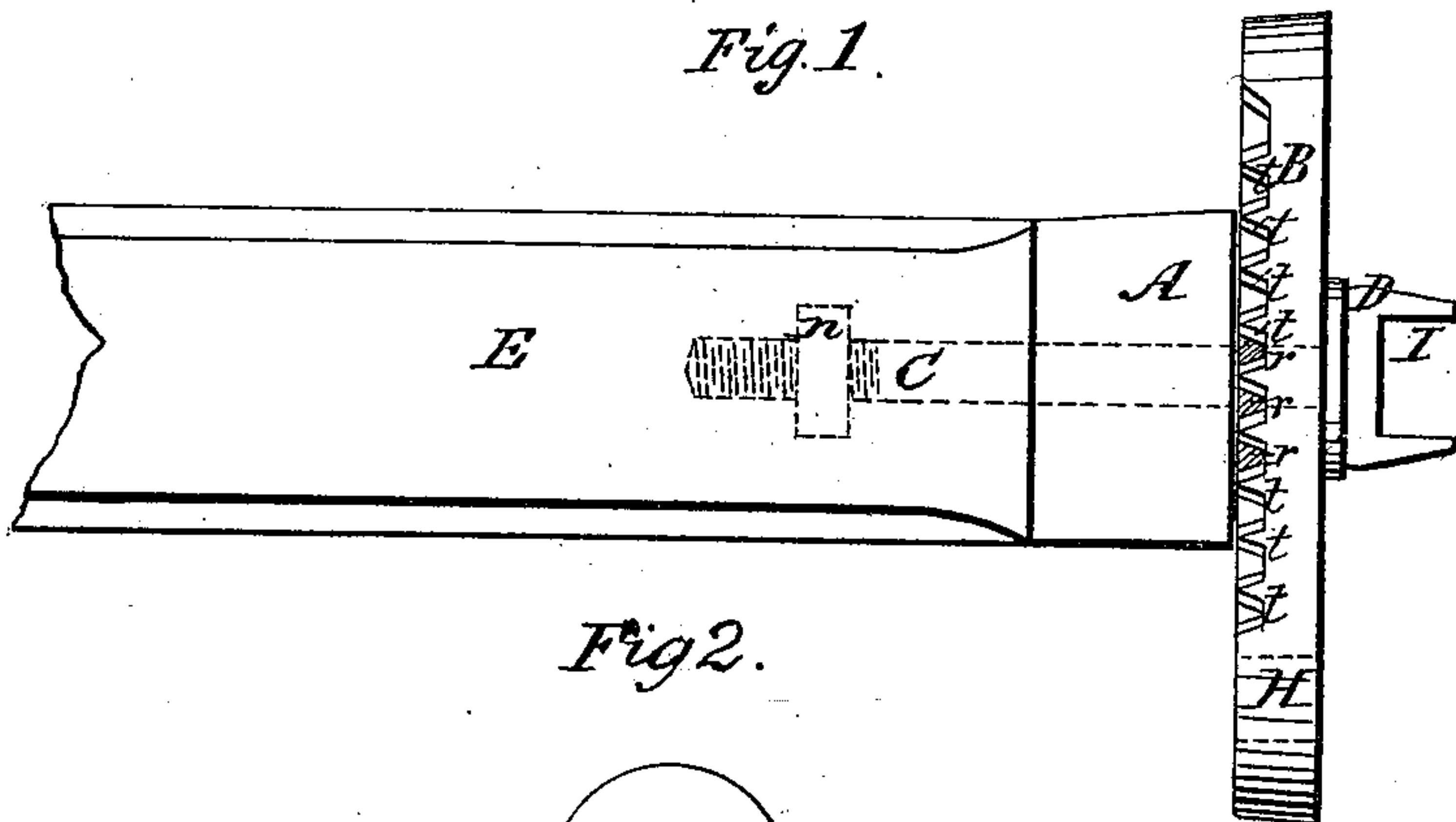


Fig. 2.

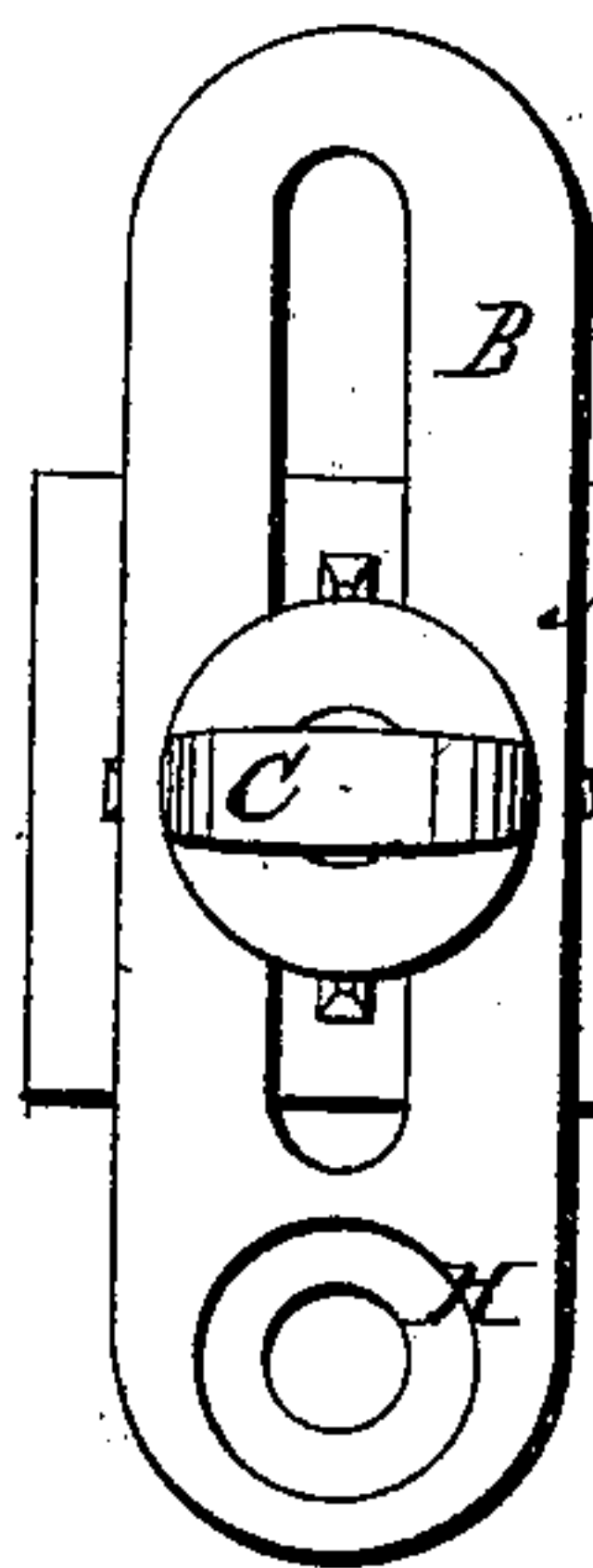


Fig. 3.

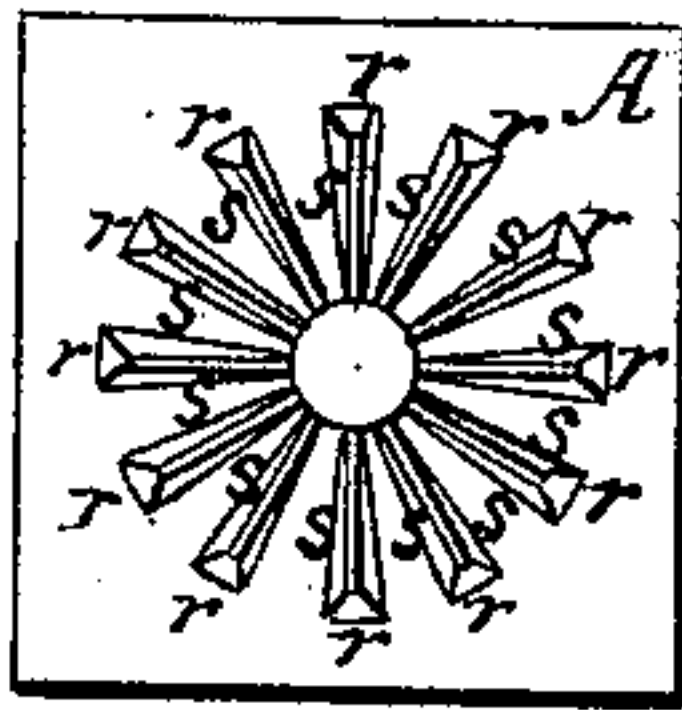


Fig. 4.

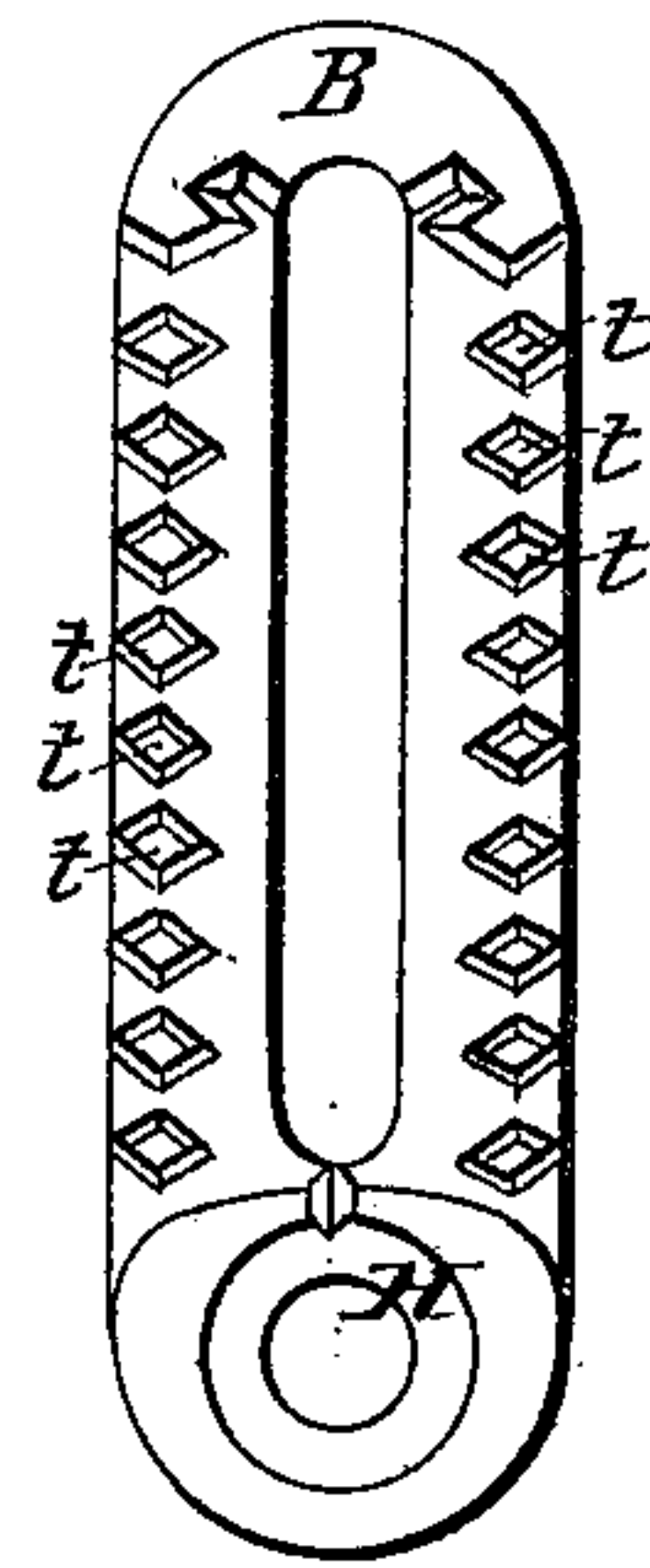


Fig. 6.

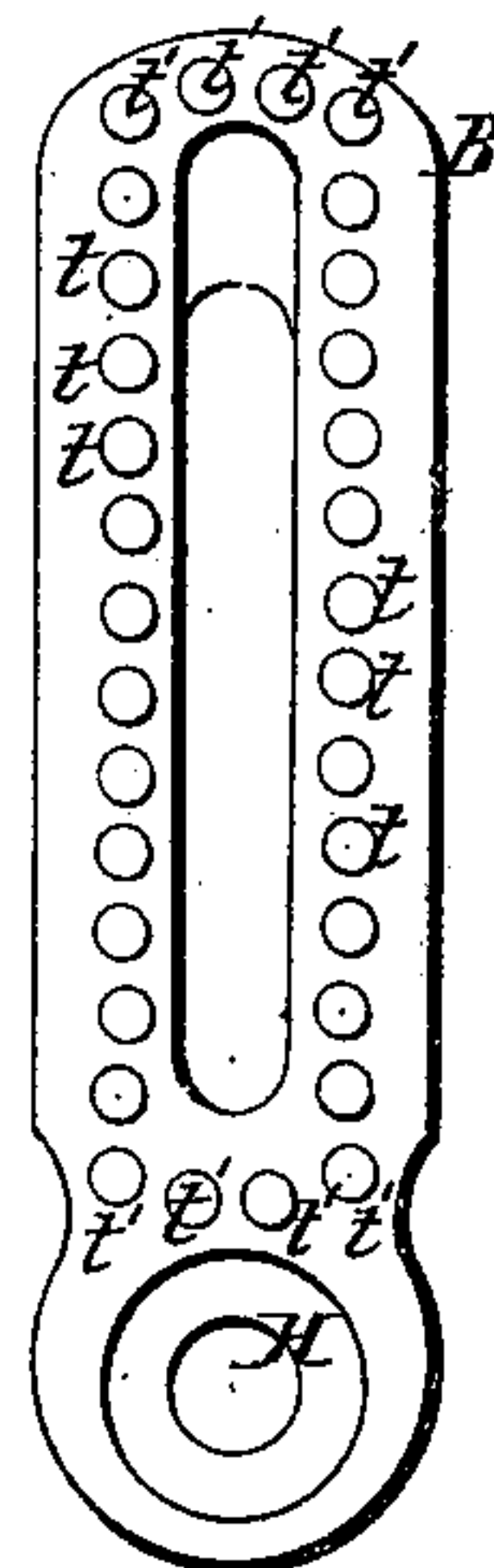
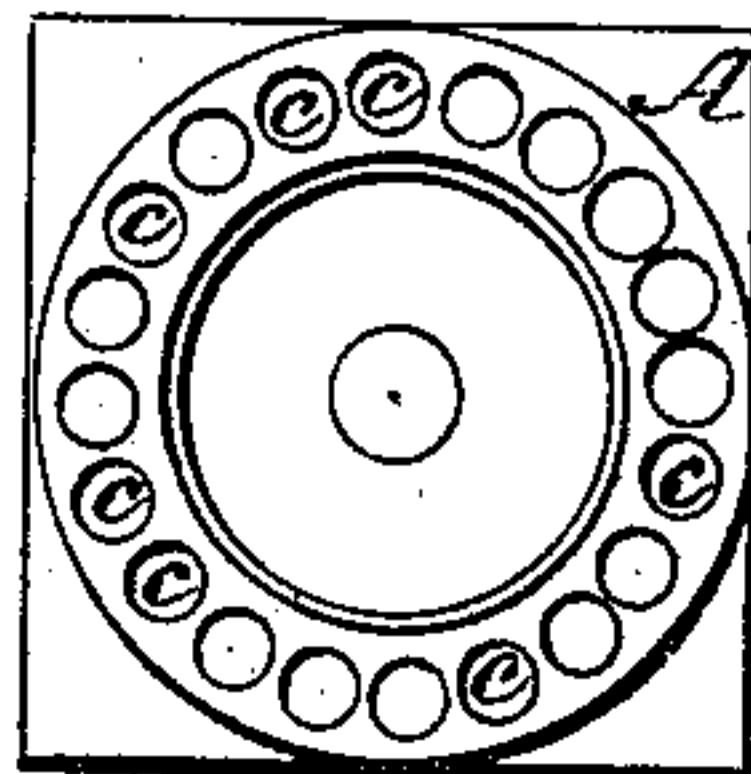


Fig. 5.



UNITED STATES PATENT OFFICE.

GERRETT ERKSON, OF HOBART, NEW YORK.

IMPROVEMENT IN PLOW-CLEVISES.

Specification forming part of Letters Patent No. 7,651, dated September 17, 1850.

To all whom it may concern:

Be it known that I, GERRETT ERKSON, of the town of Hobart, county of Delaware and State of New York, have invented a new and useful machine called a "Center-Draft Double-Gage Clevis;" and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, which make part of this specification.

The purpose of my invention is to guide and direct the movement of plow-beams in such manner as to make the depth of the furrow and its breadth conform to the requirements of the land to be tilled. It is of such a construction as to enable me to direct the line of draft, either above or below, to the right or the left of the central line of the plow-beam. It is both on account of this faculty of doubling the extent of movement of the ordinary clevis and of the double sets of teeth and cavities by which the position of the slot-bar is secured against the end of the beam—immovable except when intentionally released—that I call my machine a center-draft double-gage clevis.

The construction of my clevis will be understood by reference to the drawings, in which Figure 1 is a side elevation of a part of plow beam and clevis; Fig. 2, a front or end view of the same. Fig. 3 is an end view of the cast-iron square socket A which goes upon the end of the plow-beam, with the gage-ridges *r r r*, &c., and the grooves *s s s* arranged radially around a common center. The teeth or ridges *r* are seen to increase in breadth from the center outward. Fig. 4 is a back view of the slotted bar B of the clevis, having on each side lozenge-shaped teeth *t t t* with their longest diagonals across the breadth of the clevis-bar. These teeth are so formed and arranged as to match into the spaces *s s s*, &c., and receive between them the ridges *r r r*, &c., of the box or socket A, Fig. 3. As seen in Fig. 1, not less than three of the ridges *r r r* are on each side in contact with the teeth *t t t*, and since all the teeth as well as the ridges are made sloping, the tightening up of the screw C by turning the forked end I and forcing it into the sunken nut *n*, this operation brings every tooth to a full bearing, such as effectually to prevent slipping in any direction. Fig. 5 is an end

view of the square socket A, having instead of the radial ridges of Fig. 3 a circle of conical cavities, *c c c*, &c., to receive conical points along the sides of the slotted bar. Fig. 6 is the slotted bar B with the above-mentioned conical points seen at *t t t*, &c. When this bar is applied to A, Fig. 5, four or six of the points *t* will enter corresponding cavities in A. If the curved end row of the points *t'* be brought into the circle of cavities in A, all four of the points will match into corresponding holes, and at the same time two points *t* along the lateral rows will be found in bearings. When neither end of the bar is over any part of the circle of cavities four points only will come into action at the same time.

In order to give a broader bearing to the head of the screw C, I place between it and the clevis-bar B, Fig. 1, the washer D.

In Figs. 1, 2, 4, and 6, H represents the hole in the clevis through which passes the draft-rod from the posterior part of the beam of the plow.

From the above description it is made apparent that H may be in any desired position with reference to the axis of the plow-beam, and that whether made with the radial ridges *r r*, Fig. 3, and the rhombic teeth *t t*, Fig. 4, or with the circle of conical holes *c c*, Fig. 5, and the conical teeth *t t*, Fig. 6, the machine will in both modifications present the same property of universality of directing power and the entire absence of all tendency to slide, not in any case depending on the mere friction of surfaces created by the pressure of the screw to retain it in place.

I do not limit myself to the particular form of holes in the socket, Fig. 5, and of teeth in Fig. 6, nor will it be necessary that the holes should always be on the socket and the teeth on the slotted bar; but the reverse may be the arrangement, if preferred. The principle is, however, still preserved of making two such series of prominences and depressions, one on the fixed socket and the other on the movable bar which guides the draft rod or chain, that the two may be set in any required position throughout the circle and at any distance of the draft rod from the center of the beam, while the prominences and cavities shall in every position prevent the slipping of the clevis-bar by

resistances independent of mere friction. In both modifications it is evident that no slipping or derangement can take place without breaking away the prominences of either the socket or the slotted bar, or of both.

I am aware that attempts have been made to construct clevises having notches in one direction, while in other directions the confinement of the clevis depended on the friction created by a pressure of one part of the apparatus on another. This defect my clevis is intended to obviate, while it attains the purpose of gaging the position circularly and the distance radially from any given position of the axis of the plow-beam. I commonly make my clevis, except the tightening-screw C and nut n, of cast-iron, but do not limit myself to any particular material.

I am aware that plow-clevises having radial teeth or cogs on the front of a socket and parallel ridges to slide between them have already been used; but these I do not claim, since they are, in my estimation, defective for want of numerous bearing-points and from not presenting to the longitudinal motion of the parallel ridges any resistance except friction.

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

1. So making a clevis with teeth or prominences and cavities on the front surface of a socket matching with corresponding depressions or cavities and elevations on the surface of a movable bar that the bar and socket, when set together by a screw or other equivalent fastening in the required position, may have numerous bearings and be wholly prevented from either sliding or revolving in any direction without breaking the continuity of materials of which the parts are composed.

2. In combination with a series of radial ridges or a circle of cavities on the end of a clevis-socket fixed at the extremity of the plow-beam, a series of teeth or conical points on a movable clevis-bar, so adjusted to each other that the guide-hole of the clevis-bar may be held in any required position and at any necessary distance from the axis of the beam without relying on friction of the surfaces to prevent slipping, in the manner and for the purpose herein set forth.

GERRETT ERKSON.

Witnesses:

WALTER R. JOHNSON,
JOHN L. SMITH.