

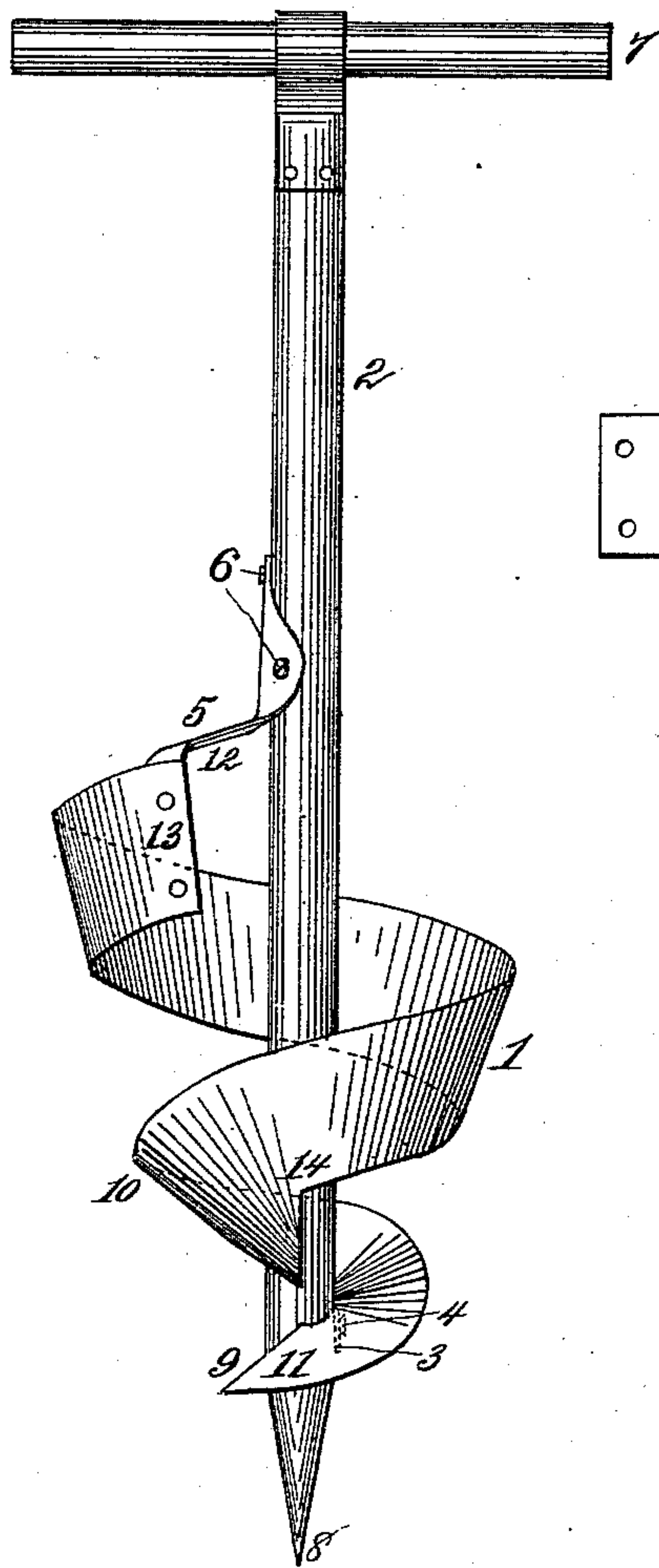
(No Model.)

T. TOW.  
EARTH AUGER.

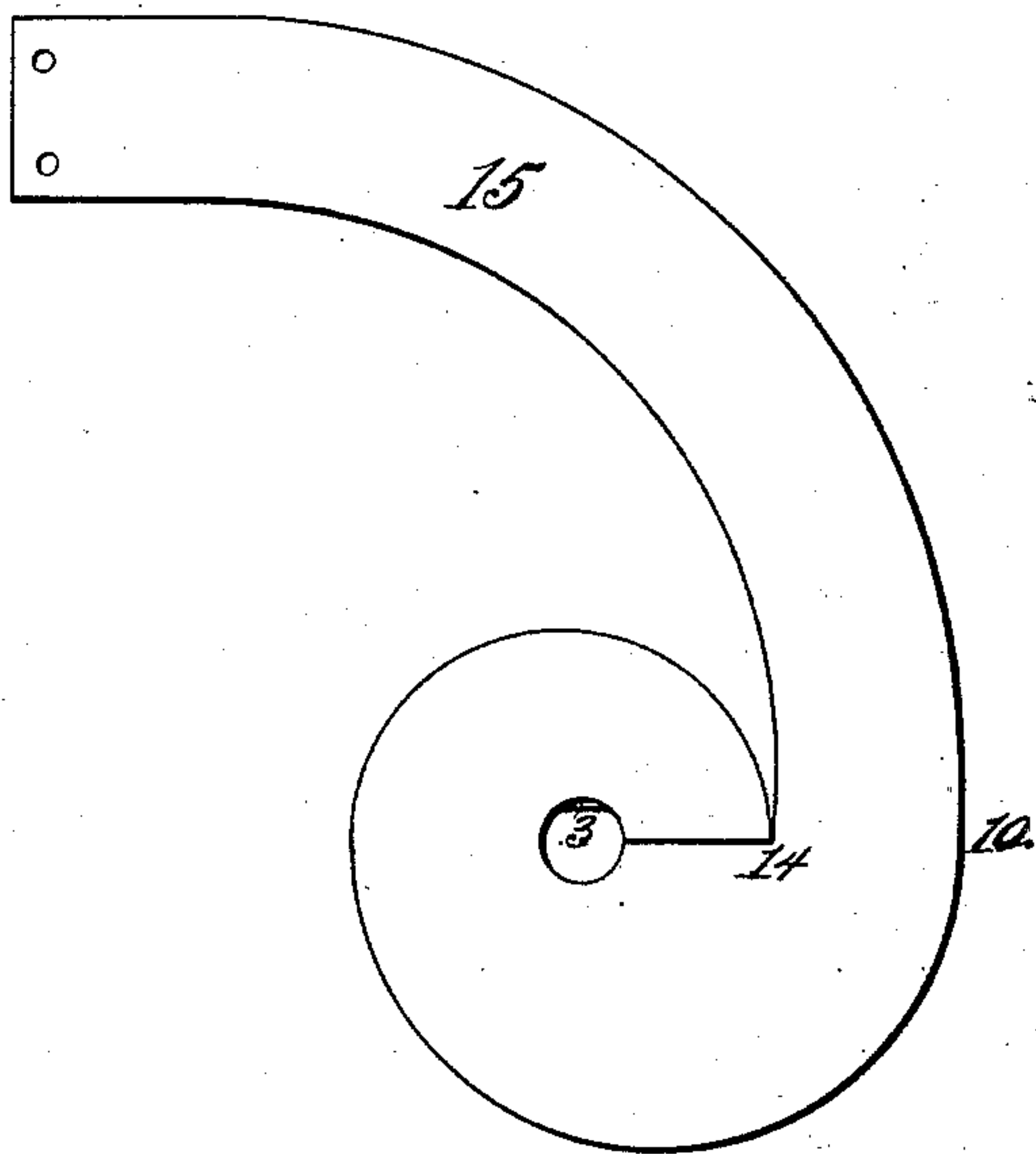
No. 379,345.

Patented Mar. 13, 1888.

*Fig. 1.*



*Fig. 2.*



WITNESSES:

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# UNITED STATES PATENT OFFICE.

THOMAS TOW, OF MILES CITY, MONTANA TERRITORY.

## EARTH-AUGER.

SPECIFICATION forming part of Letters Patent No. 379,345, dated March 13, 1888.

Application filed September 20, 1887. Serial No. 250,186. (No model.)

*To all whom it may concern:*

Be it known that I, THOMAS TOW, of Miles City, in the county of Custer and Territory of Montana, have invented a new and Improved Earth-Auger, of which the following is a full, clear, and exact description.

My invention relates to an improvement in earth-augers, and has for its object to provide an earth-auger which shall have a great length of cutting-edge, and which can be easily and quickly forced down into the earth and at the same time take hold of the earth to lift it.

The invention also consists in the construction of an earth-auger, as hereinafter described and claimed.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar letters of reference indicate corresponding parts in both figures.

Figure 1 illustrates an earth-auger constructed in accordance with my invention, and Fig. 2 is a view of the blank for the blade.

The blade 1 of the auger is made of spiral shape, as shown, the spiral increasing in diameter from the lower to the upper end of the blade, so that the angle of the blade gradually decreases in an upward direction from the rod 2, on which it is mounted and secured in any suitable manner—as, for example, by a lip, 3, and screw 4 at its lower end, and by a brace, 5, and screws 6 at its upper end. The blade 1 from the point 9 to the point 10 is inclined at the same angle to rod 2 that the blade is at 11, and the blade from the point 10, opposite which the inner edge of the blade ceases to be concentric with the rod, to the end 13 has said inner edge carried outward on the line of a quicker spiral than the outer edge, whereby the upper end of the blade is nearly parallel with the rod.

The rod 2 is made of a convenient length, and is operated by the handle 7, secured thereto, as shown. The lower end of the rod is pointed, as at 8, to enter the ground. Any suitable pitch may be given to the spiral and its diameter increased from bottom to top, as desired. The blade, as well as the rod, may be made of iron, but is preferably made of steel of suitable thickness to make it durable and yet not too heavy.

The blade may be made in one piece, as

shown in Fig. 2, and bent into the required shape, as shown in Fig. 1. The piece cut away to form the aperture for the rod is not entirely separated, but forms the lip 3. From the central aperture the plate is cut radially to the point 14, from which it is cut on a scroll line to the point 10. From the points 10 and 14 the plate is cut on the lines of a larger scroll to form the tongue 15, as shown. The brace consists of a plate of steel bent to the proper form, and has its edge 12 inclined, so as to present a small resistance to the earth when the auger is filled. By means of the spiral form above described and the convergence and inclination of the angle of the blade from bottom to top the auger will quickly penetrate the earth and the cutting be effected throughout the spiral.

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

1. An earth auger having a spiral blade mounted on a rod, the angle of the blade gradually decreasing in an upward direction from the rod on radial lines with its axis, substantially as shown and described.

2. An earth-auger having a spiral blade with a gradually-converging cutting-edge from the lower to the upper end of the blade on radial lines with the axis of the shaft, substantially as shown and described.

3. A blade for an earth-auger, cut from a sheet of metal, substantially as described, and consisting of a spiral blade the angle of which on radial lines with the axis of its shaft gradually decreases upwardly, substantially as shown and described.

4. An earth-auger having the cutting-edge of its blade arranged in a spiral, and said blade for one turn arranged at the same angle to its supporting-rod and for the rest of the length with a gradually-decreasing angle to said rod, substantially as described.

5. In an earth-auger, the combination, with rod 2, having handle 7 and point 8, of blade 1 and horizontally and vertically inclined brace 5, substantially as described.

THOMAS TOW.

Witnesses:

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