

(No Model.)

E. M. WILCOX.

HORSE POWER SWEEP FOR GRINDING MILLS.

No. 270,531.

Patented Jan. 9, 1883.

Fig. 1.

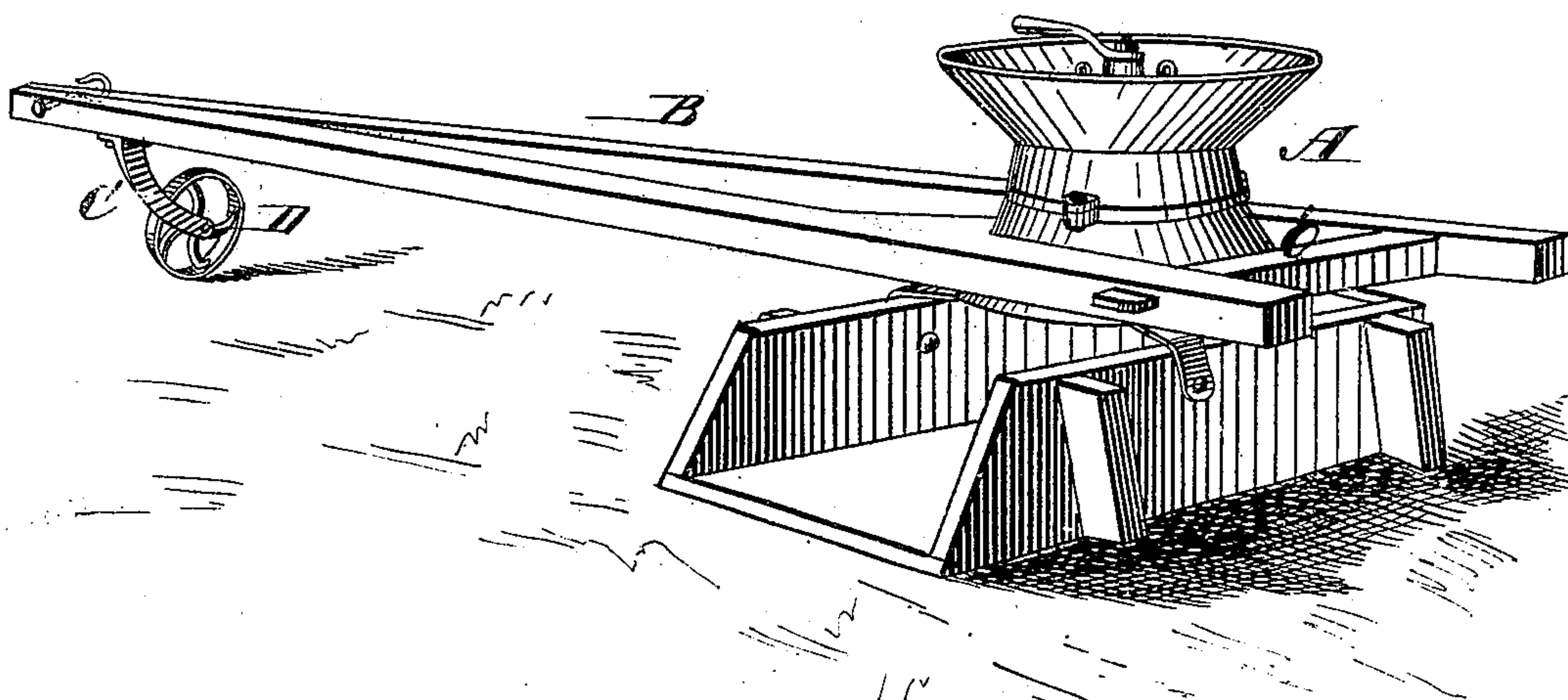
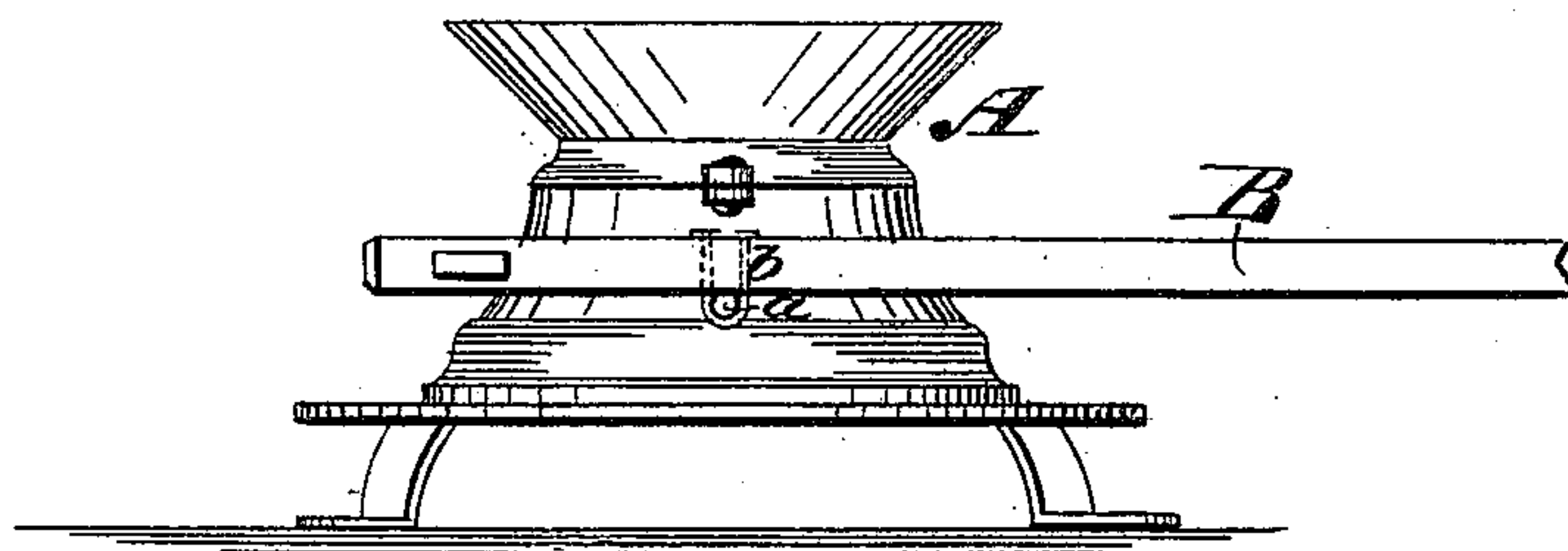


Fig. 2.



WITNESSES:

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EDWARD M. WILCOX, OF WHITEWATER, WISCONSIN, ASSIGNOR TO THE
WINCHESTER & PARTRIDGE MANUFACTURING COMPANY, OF SAME
PLACE.

HORSE-POWER SWEEP FOR GRINDING-MILLS.

SPECIFICATION forming part of Letters Patent No. 270,531, dated January 9, 1883.

Application filed November 13, 1882. (No model.)

To all whom it may concern:

Be it known that I, EDWARD M. WILCOX, of Whitewater, in the county of Walworth and State of Wisconsin, have invented a new and
5 Improved Horse-Power Sweep for Grinding-Mills, of which the following is a full, clear, and exact description.

My invention relates to grinding-mills which are operated by horse-power applied to a
10 sweep for obtaining a horizontal rotary motion. Usually these sweeps have been attached by means of lugs on each side of the mill upon which the sweep rests, and a lug at the back of the mill under which the rear cross-
15 piece of the sweep passes, so that the outer end of the sweep is held up in position. By this construction the weight of the sweep is exerted upon one side of the mill, and has proved to be a serious obstacle to uniform grinding, as
20 it prevents the mill from running truly.

The object of my invention is to relieve the mill of the one-sided pressure occasioned by the weight of the sweep; and to that end it consists in the peculiar construction and arrangement of the parts, as hereinafter more
25 fully set forth, and pointed out in the claims.

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

Figure 1 is a perspective view of a grinding-mill and power-sweep with my improvement. Fig. 2 is a side view of the mill.

A is the mill, which may be of any usual
35 character and construction; and B is the horse-power sweep, consisting of side bars connected together at their forward ends, and separated at their rear ends at a suitable distance for passing at opposite sides of the mill. The bifurcated parts of the sweep are connected together near their rear ends by the cross-bar O.
40 (See Fig. 1.)

At the outer end of the sweep is attached an iron arm, C, which carries a caster wheel or
45 roller, D, which wheel, resting upon the ground, serves to support the outer end of the sweep. The arm C extends backward of the sweep and in a direction opposite to that in which the sweep is drawn by the horse, so that the wheel
50 shall follow the horse and support the sweep uniformly. The arm may, if desired, be pivoted upon the sweep, so that it may accommo-

date itself more readily to the movement. By these means the weight of the sweep is prevented from being exerted downward upon one side of the mill, and the grinding-surfaces are
55 thus not thrown out of place, with the result of unequal action of the mill. The weight of the inner end of the sweep resting uniformly at opposite sides and squarely upon the mill, 60 the operation of the mill will be uniform.

The sweep is supported on the mill by the side lugs, *a a*.

b b represent staples encircling the side lugs or pins, *a*, and passing thence through the bi-
65 furcated arms of the sweep B, thus firmly securing the sweeps to the mill and pivoting it thereto. The rear lug usually required upon the mill is in this case dispensed with.

I am aware that in a traction horse-power
70 the outer end of the axle has heretofore been supported by a wheel journaled on the end of the same, and I therefore lay no claim to such construction. In my invention the caster-wheel is adapted to be applied to any form of
75 sweep without the necessity of altering or changing the sweep in any particular, whereas in the construction disclaimed the end of the axle must be journaled to receive the hub of the supporting-wheel.
80

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

1. In a horse-power sweep for grinding-mills, the combination, with the sweep B, of the rearwardly-inclined arm C, secured to the sweep
85 near its outer end, and carrying at its lower end the wheel D, substantially as described, whereby the supporting-wheel can be applied to the outer end of any sweep without altering or changing the form of the sweep, as set forth.
90

2. The combination, with the mill A, provided with the opposite side lugs or pins, *a*, of the bifurcated sweep B, provided with the rear cross-bar, O, staples *b*, encircling the side lugs and passing through the bifurcated arms of
95 the sweep, and rearwardly-inclined arm C, secured to the sweep near its outer end, and carrying at its lower end the wheel D, substantially as shown and described.

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Witnesses:

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