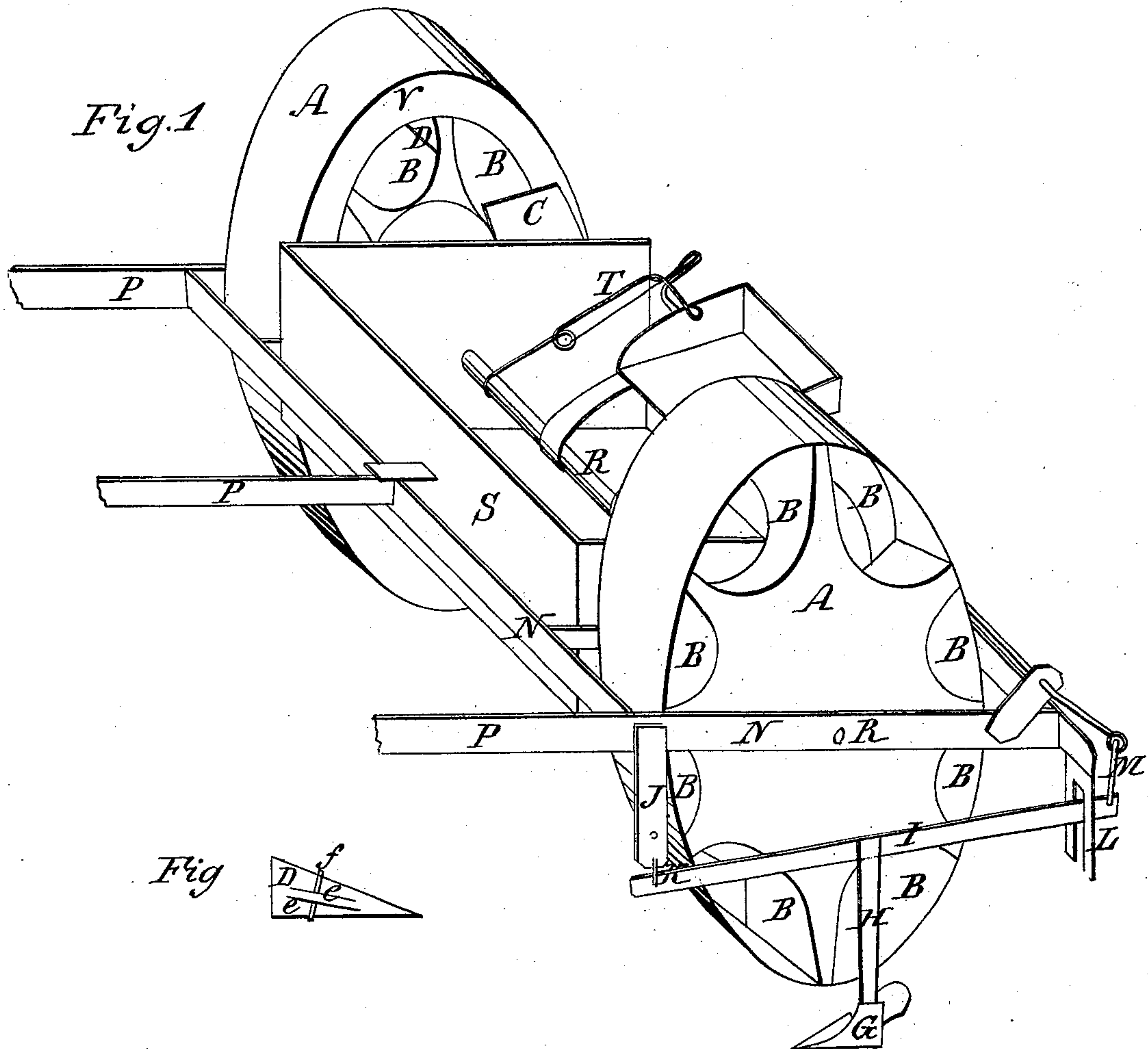


*Cowden & Brown.*

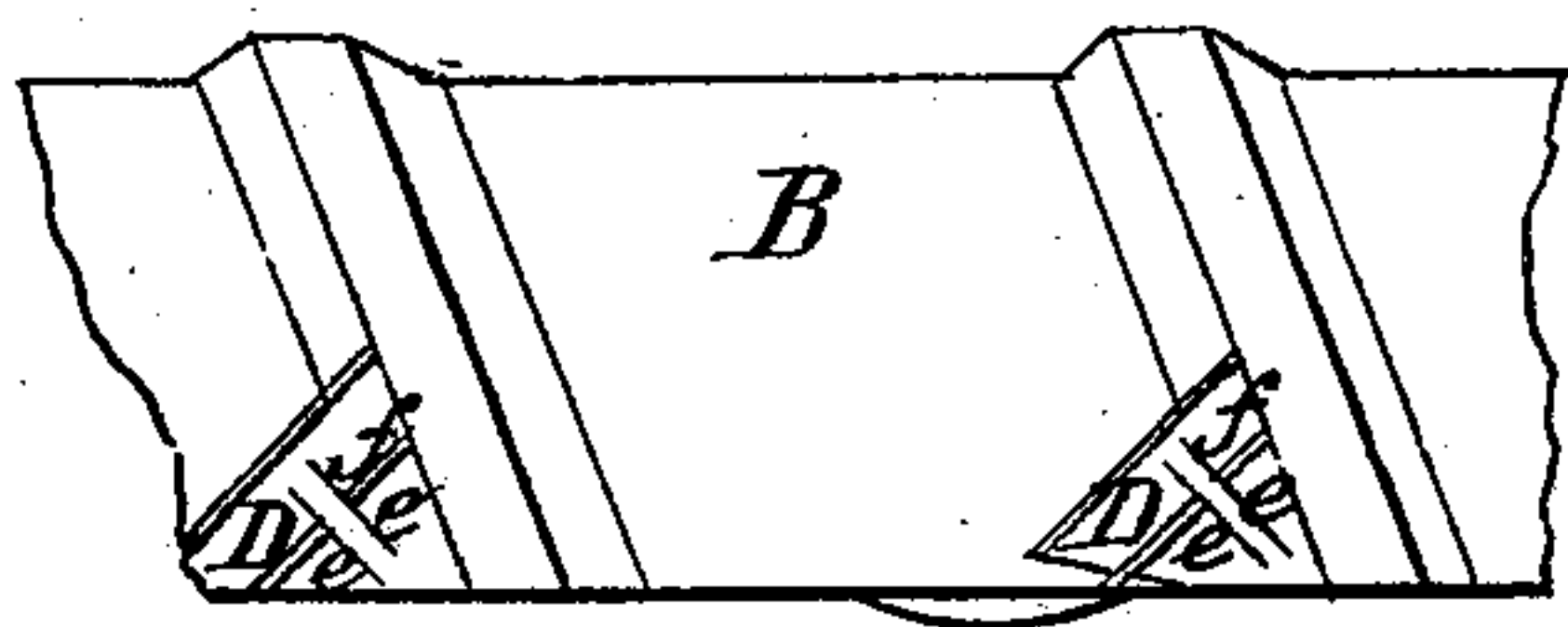
*Excavator.*

*N<sup>o</sup> 95,668.*

*Patented Oct. 12, 1869.*



*Fig. 2.*



*Witnesses.*

*Lewis Woodward  
Joseph Woodward*

*Inventors  
James Cowden  
Daniel Brown  
By their Attorney  
Geo. L. Chopin*

# United States Patent Office.

JAMES COWDEN, OF LA PRAIRIE CENTRE, AND DANIEL BROWN,  
OF AKRON, ILLINOIS.

Letters Patent No. 95,658, dated October 12, 1869.

## IMPROVED EXCAVATOR.

The Schedule referred to in these Letters Patent and making part of the same.

*To all whom it may concern:*

Be it known that we, JAMES COWDEN, of La Prairie Centre, Marshall county, Illinois, and DANIEL BROWN, of Akron, in the county of Peoria, in the State of Illinois, have invented an Improved Excavator; and we do hereby declare that the following is a full, and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, making a part of this specification, in which—

Figure 1 is a perspective representation of our invention.

Figure 2, a view of one of the wheel-elevators.

Figure 3, an elevation of the guide which regulates the discharge of earth.

In order to give a correct understanding of our invention, we have marked corresponding parts with similar letters, and will now give a detailed description.

A A represent the wheels, which are made to run on axle R R, fig. 1, arranged to turn in frame N N, to which poles P P P are attached for the purpose of operating the excavator. These wheels have a series of elevators made through them, as seen at B B, &c., figs. 1 and 2, diagonally with the axle R, and near the peripheries of said wheels, which are made to roll upon the ground.

Said elevators are designed to carry the earth, loosened by a plow, G, upward and into a dumping-box, S, fig. 1, which is designed to transport it to any desired place.

The plow G is attached to a lever, I, by means of a shank, H, which can be raised or lowered in a guide, L, by means of a rod, M, and lever, T, fig. 1, in the usual manner; the front end of said lever being attached to a support, J, by means of a joint, K, in order to give plow G a vertical motion.

The wheels A A can be made of wood or iron, as most convenient, but if wood is used, strong, wide tire should be shrunk on their peripheries, and the elevators B B should be lined in order to prevent wear.

A scraper, C, fig. 1, is arranged to fit against the inside of each wheel A, for the purpose of cleaning

the earth from said wheels, and causing it to fall into dumping-box S.

A guide, D, is attached to one or more of the elevators B for the purpose of giving the proper direction to the earth after it has been elevated. We consider the said guide important in the matter of conveying sand, loam, clay, &c., into the dumping-box S, as the character of different soils may require a different pitch at the discharge-end of the elevator in order that their direction may be controlled.

The method of securing the guide consists in putting a pin, f, through slots e e, fig. 3, and through a loop or other fastening attached to the inner surface of the elevators B, by which means the guide can be set at any desired pitch.

A rim, V, is attached to the periphery of wheels A, and made to cover such a portion of the elevator B as is necessary to keep the earth in place when being carried up.

It will be seen from this description that the earth is made to enter the elevators B directly opposite the plow G, and is then carried up by the motion of the wheels.

In the drawings, a double or a two-wheeled excavator is shown, but it may be desirable at times to have only one wheel; this can be made to operate equally well, but will require a change in the frame-work, to meet the case.

Having thus fully described our invention,

What we claim, and desire to secure by Letters Patent, is—

1. Broadly, the guides D, constructed as described, to give direction to the earth when passing through elevators B, as herein specified.

2. The combination of elevators B, rim V, and scraper C, with guide D, substantially as set forth.

3. Making the guide D adjustable, substantially as herein set forth.

DANIEL BROWN.  
JAMES COWDEN.

Witnesses:

HUGH McVICKER,  
BENJAMIN F. BOUTON.