

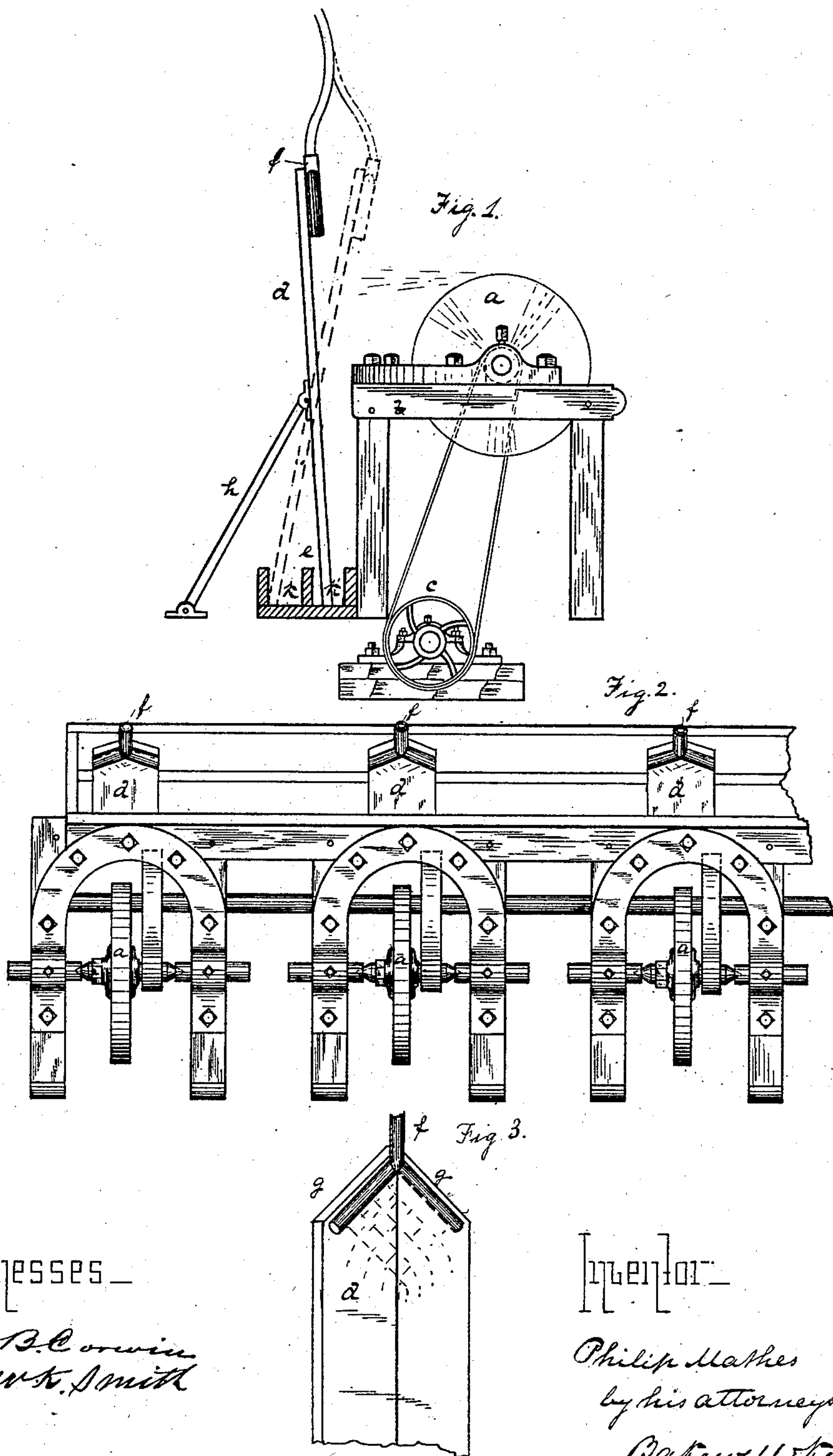
(No Model.)

P. MATHES.

DEVICE FOR SAVING THE WASTE FROM EMERY WHEELS.

No. 294,141.

Patented Feb. 26, 1884.



Witnesses—

W. B. Corwin
John Smith

Inventor—

Philip Mathes
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UNITED STATES PATENT OFFICE.

PHILIP MATHES, OF IDLEWOOD, PENNSYLVANIA.

DEVICE FOR SAVING THE WASTE FROM EMERY-WHEELS.

SPECIFICATION forming part of Letters Patent No. 294,141, dated February 26, 1884.

Application filed August 10, 1883. (No model.)

To all whom it may concern:

Be it known that I, PHILIP MATHES, of Idlewood, in the county of Allegheny and State of Pennsylvania, have invented a new and useful Improvement in Devices for Saving the Waste from Emery-Wheels; and I do hereby declare the following to be a full, clear, and exact description thereof.

My invention relates to an improvement in devices for saving the waste metal or dust from emery-wheels, and in collecting the same, so as to prevent the injurious effect thereof on the workman; and it consists in an adjustable shield or screen having a perforated water-pipe attached to the upper portion of the face thereof, and a receiving-receptacle divided or partitioned into separate chambers, so as to collect the filings from different metals in separate receptacles from each other.

In grinding metals—such as brass or iron—there is a great waste of valuable material, the filings being allowed to fly off from the wheel and to become mixed with dirt and the filings of inferior metals. This dust, as it floats in the air, is also very injurious to the workman at the wheel. By the use of my invention these filings or waste are carefully collected, and in such a manner as to keep filings of different metals separate from each other.

I will now describe my invention, so that others skilled in the art may manufacture and use the same, reference being had to the accompanying drawings, forming a part of this specification, in which—

Figure 1 is a side elevation of an emery-wheel provided with my improved device. Fig. 2 is a plan view of a series of emery-wheels provided with my improved devices; and Fig. 3 is a detached view of the top portion of the shield or screen, showing the water-pipes.

Like letters of reference indicate like parts wherever they occur.

In the drawings, A represents an emery-wheel mounted on a suitable stand, B, and connected with the power-wheel C. Situated directly behind the emery-wheel is a shield or screen, D, formed of wood or other material, and extending from a point above the emery-wheel down to a box or receptacle, E. Lead-

ing to the top of the screen D is a water-pipe, F, having two branching arms, G G, so perforated as to permit the water to trickle from the perforations down the face of the screen into the box E. Back of the shield D is a rod, H, one end of which is hinged to the back of the screen, while the other end is hinged to the floor, so as to form an adjustable rest or support for the screen. At the bottom of the screen is a box or boxes having one or more compartments, K K'. This shield *d* may be V-shaped—that is, formed of two boards extending at an angle from each other, as shown in Fig. 3; or it may be formed in a single piece, as shown in Fig. 2.

The operation is as follows: When the metal to be ground is placed on the wheel, the waste or filings fly off from the wheel against the screen, and, adhering thereto, owing to the moisture, they are carried down into the box E by the trickling streams of water. In order to keep the filings of different metals separate, the end of the screen or shield D is placed in the different receptacles K K', according to the kind of metal being ground. This is easily done, as the screen is supported adjustably by the hinged rod H. The pipe by which water is conveyed to the pipe F should be of rubber or other flexible material, so as not to interfere with the movement of the screen.

The advantages of my invention are the great saving in material, as the filings, being collected in suitable receptacles and kept clean and separate from filings of other metals, may be melted and cast into the desired form, and also the prevention of injury to the workman from the fine emery dust or filings; and as the screen is adjustable, by changing it from one receptacle to the other, the emery-wheel may be used successively to grind articles of different metals without stopping to collect and clear away the filings of one kind to prevent them from becoming mixed with the filings of another.

I am aware that shields arranged to be kept moist, and thereby collect dust and filings, have been used heretofore. I do not therefore desire to claim the same, broadly; but,

Having thus described my invention, what I

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

The devices herein described, consisting of
an adjustable screen having a perforated pipe
5 attached to the upper portion of the face
thereof, and a series of boxes or separate re-
ceptacles, substantially as and for the pur-
pose specified.

In testimony whereof I have hereunto set my
hand this 8th day of August, A. D. 1883.

PHILIP MATHES.

Witnesses:

W. B. CORWIN,
JAMES K. BAKEWELL.

294,142
a/c 294,149