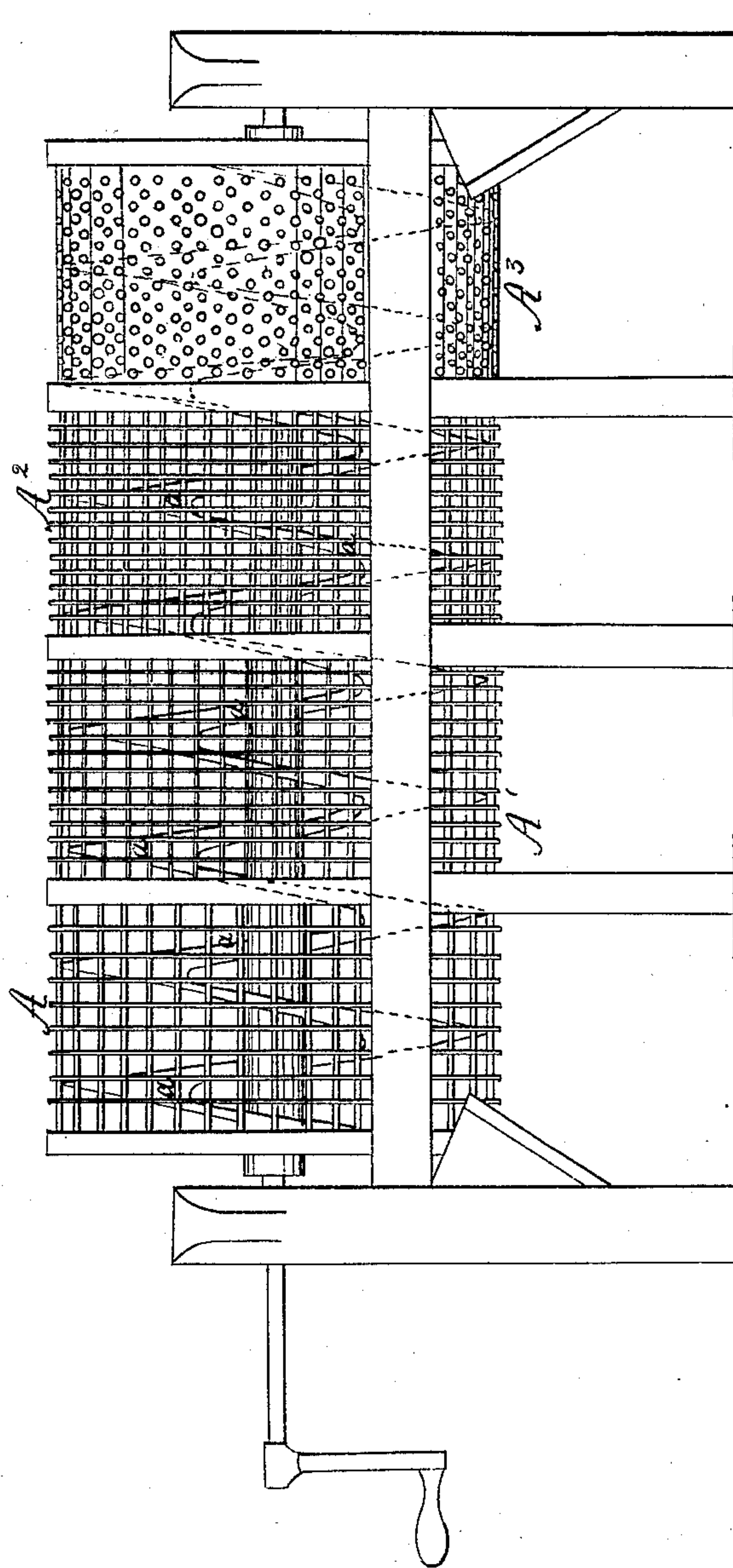


B. S. Hort,
Coal Screen.
N^o 2,451. Patented Feb. 7, 1842.



UNITED STATES PATENT OFFICE.

BENJN. S. HORT, OF KENSINGTON, PENNSYLVANIA.

MACHINE FOR SCREENING OR SIFTING COAL.

Specification of Letters Patent No. 2,451, dated February 7, 1842.

To all whom it may concern:

Be it known that I, BENJAMIN S. HORT, of Kensington, in the county of Philadelphia and State of Pennsylvania, have made
5 a new and useful improvement in the manner of constructing a revolving single-cylinder screen for screening hard coal, gravel, and other substances requiring to be separated into parcels varying in size from
10 each other; and I do hereby declare that the following is a full and exact description thereof.

In the accompanying drawing, A, A, is a single cylinder screen, which is constructed
15 of hoops and rods of iron, or otherwise, not necessarily differing, in this respect, from the screens now in use. The dimensions of the meshes must be governed by the use to which the screen is put; when used for coal, the part A, will have openings which will
20 allow what is usually called broken coal to pass through; the part A', openings adapted to egg coal; the part A², to nut coal, and the part A³, to lime burning, or fine, coal.
25 In such cylindrical screens as have heretofore been constructed, the coal has been made to pass through them by giving a sufficient degree of inclination to the instrument to effect that object; but the screen
30 as constructed by me is to be placed horizontally, or nearly so, and the coal which is fed in at one end is to be carried toward the other by means of a spiral thread, which may be made of sheet iron, and the outer
35 edge of which is in contact with the meshes

of the screen; this spiral thread is seen at, *a*, *a*, in the drawings. The threads may be placed at any required distance apart, and the coal is, of course, to be fed in at that end which has the finer meshes; and when
40 the screen is made to revolve in the proper direction, the coal will be carried toward the opposite end by an equable motion, which is not the case with the screen as usually constructed with a continuous cylinder, and without a spiral thread, the action
45 of such a screen being, in this respect, very different with wet, and with dry, coal, as well as with other articles, either from the same, or other, causes. 50

Having thus fully described the nature of my improvement in the revolving, single, cylinder screen, for screening hard coal, and other articles, what I claim therein as new, and desire to secure by Letters Patent, is— 55

The combining of a spiral thread of sheet metal, or other suitable substance, with such a screen, in the manner herein set forth, by which combination it is made to operate in a horizontal position, and the material to
60 be screened is carried along the cylinder with a measured velocity, depending upon the closeness of the threads of the screen, and the rapidity with which said cylinder is turned.

BENJN. S. HORT.

Witnesses:

THOS. P. JONES,
M. E. JONES.