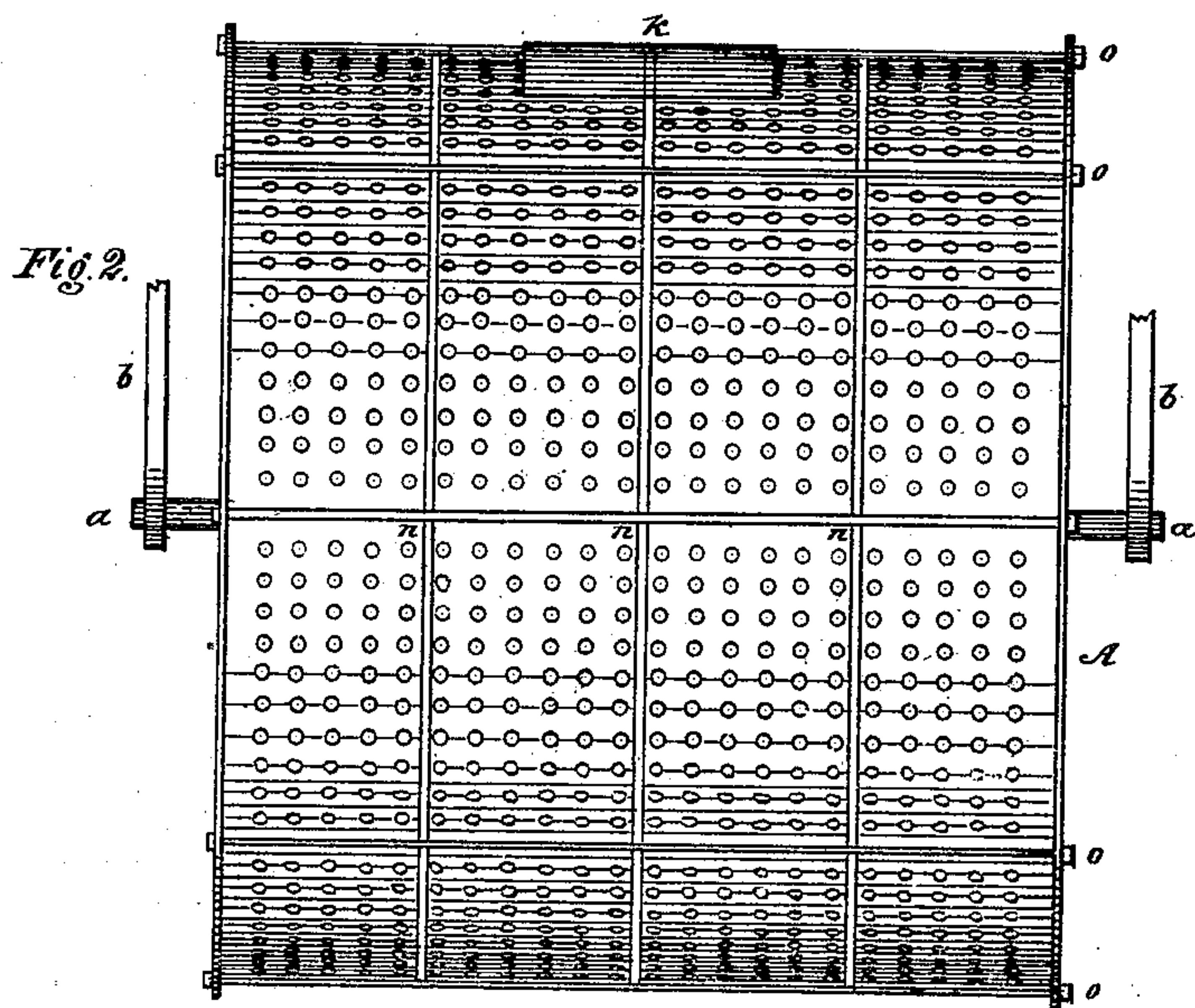
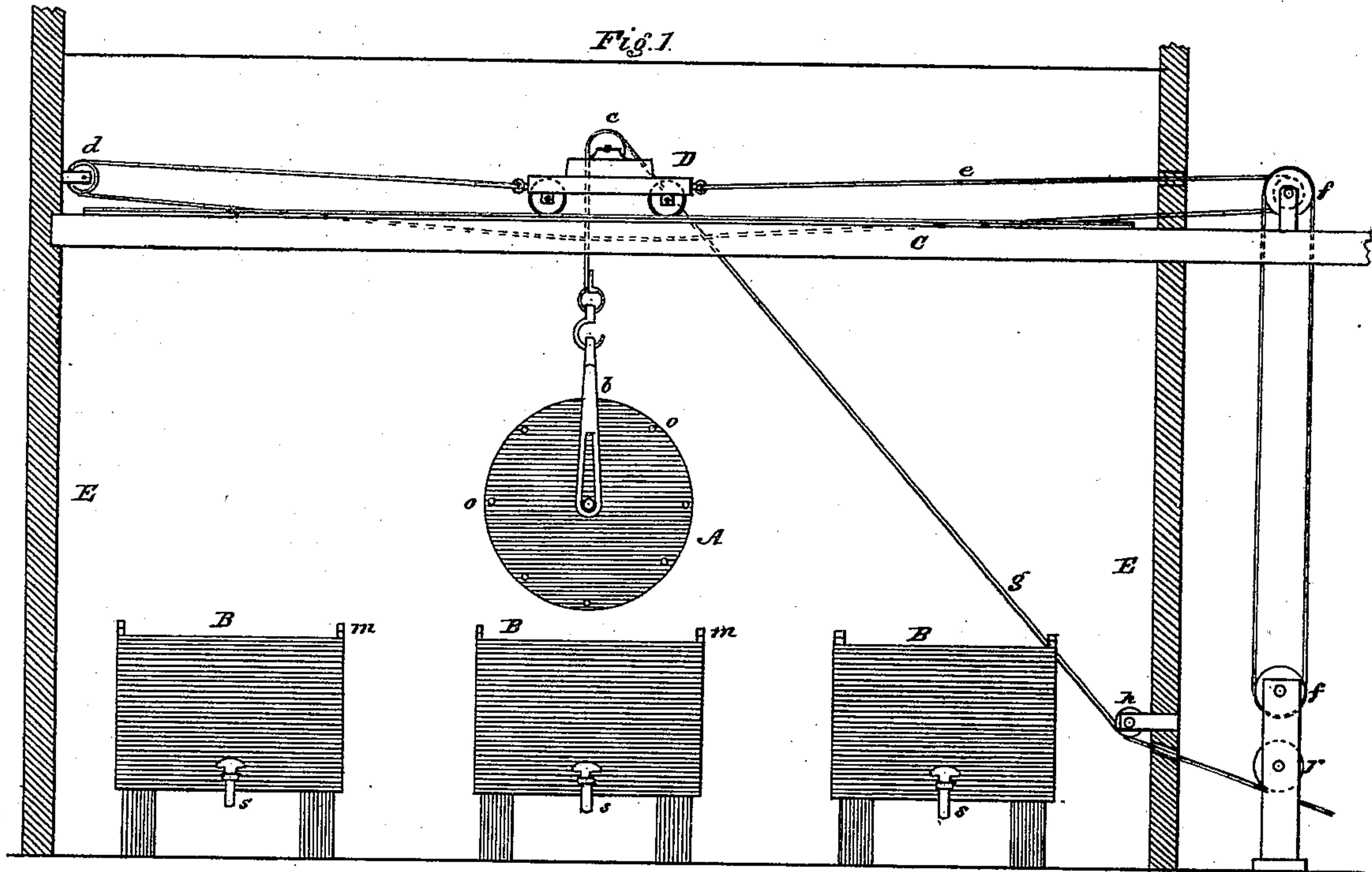


THOMAS F. WELLS.

Improvement in Apparatus for Removing Tin from Tinnors' Waste.

No. 128,001.

Patented June 18, 1872.



Witnesses.
Prof. Dr. C. C. C.
Sam. Brackett

Inventor.
Thomas F. Wells

UNITED STATES PATENT OFFICE.

THOMAS F. WELLS, OF NEW YORK, N. Y.

IMPROVEMENT IN APPARATUS FOR REMOVING TIN FROM TINNERS' WASTE.

Specification forming part of Letters Patent No. 128,001, dated June 18, 1872.

Specification describing a Perforated Trommel or Drum in Combination with an Elevated Tram-Way, for the separation of metals when in conjunction with each other, invented by THOMAS F. WELLS, of the city and State of New York.

My invention relates to a trommel or drum of a cylindrical shape, consisting of sheet-copper, perforated only on the cylinder, and supported with copper rods and straps, so as to support the heads of the cylinder. This trommel is provided with a folding door of suitable construction, for the purpose of charging and discharging it, and is made to rotate on a horizontal shaft of copper, which may be complete or merely attached to the outside of the heads. This trommel is made to revolve successively in several vats or tanks, which are charged with the liquors used in the process, it being transferred from one bearing to another by means of a truck running on an elevated tram-way, and set into rotary motion by means of a pulley which receives its motion from an engine or other power used to operate the machinery.

I intend to use this trommel particularly for the separation of tin from iron in tin scraps, or of tin and copper in tinned-copper scraps, or of zinc and iron in galvanized-iron scraps.

Figure 1 represents a side view of my trommel in a perpendicular position over one of the vats or tanks. It is held in this position by means of the arms *b b* and wire-rope *g*. Fig. 2 represents a front view of the trommel.

A is the trommel. *a* is the shaft on which it revolves. *b b* are arms connected by a ring, for the purpose of lifting it from one vat or tank into another. *n n* are straps, and *o o* are rods for the purpose of supporting the heads of the cylinder. *K* is a double door, with hinges on each side. It may extend through the whole length of the cylinder, or it may be only as small as represented.

As to the thickness of the copper sheet, the strength of the rods, &c., the sheet ought to be three-tenths of an inch thick at the ends or heads and one-eighth of an inch on the cylinder, when having a diameter of six feet and

a corresponding length. The holes should in this case have a diameter of three-eighths to one-half inch, and they ought to be two inches apart. The rods are to be three-fourths inch in diameter; but I do not confine myself to any of these dimensions; but I wish to reserve the right to vary them according to the particular uses for which the apparatus is to be used, the amount of scrap to be treated, &c.

E E in Fig. 1 designate the walls of the building in which the tram-way and the vats or tanks are placed, a special compartment being provided for the engine and boiler on account of the acid vapors which at times are evolved from the treating vats or tanks. These are designated by the letter *B*. They are of equal size and made of strong pine or other wood, each measuring from one hundred and eighty to two hundred cubic feet for a trommel of the above dimensions. These vats or tanks may be lined with glass plates, cemented together with zeiodelithe—a mixture of soap-stone and sulphur. *m m* are bearings or journals for the shaft. They are fixed above the rim of the vats or tanks, so that only one-half of the trommel is immersed in the vat or tank at the time. *S S* are faucets. *D* is a truck running on the tram-way *C*. It is worked by the endless chain *e*, which passes over pulley *d*, to which motion is given through the medium of pulleys *f f*, which receive their motion from the engine or other power used to operate the machinery and apparatus. The trommel is elevated by means of the same power, which is transmitted through wire-rope *g*, passing over pulleys *h, r*, and *c* on truck *D*, and connected with arms *b b*, which fit into the ends of the shaft *a*. It is transferred from one vat or tank into another by the apparatus just explained.

Having described my invention, I wish it to be understood that I make no claim to a rotary drum or trommel in general, for such are being used for sizing and washing ores; but

I claim as my invention, and desire to secure by Letters Patent—

1. A trommel or drum, *A*, of sheet-copper, perforated on the cylinder, and supported

with copper straps *n n* and rods *o o*, passing longitudinally, so as to support the heads of the cylinder, and provided with a double door of suitable construction, for the purpose of charging and discharging.

2. The trommel or drum A, constructed as described, in combination with the elevated

tram-way C and truck D, for the purpose of elevating the same and transferring it from one vat or tank to another.

THOMAS F. WELLS.

Witnesses:

EDWARD S. CLINCH,
JAMES H. CONANT.