

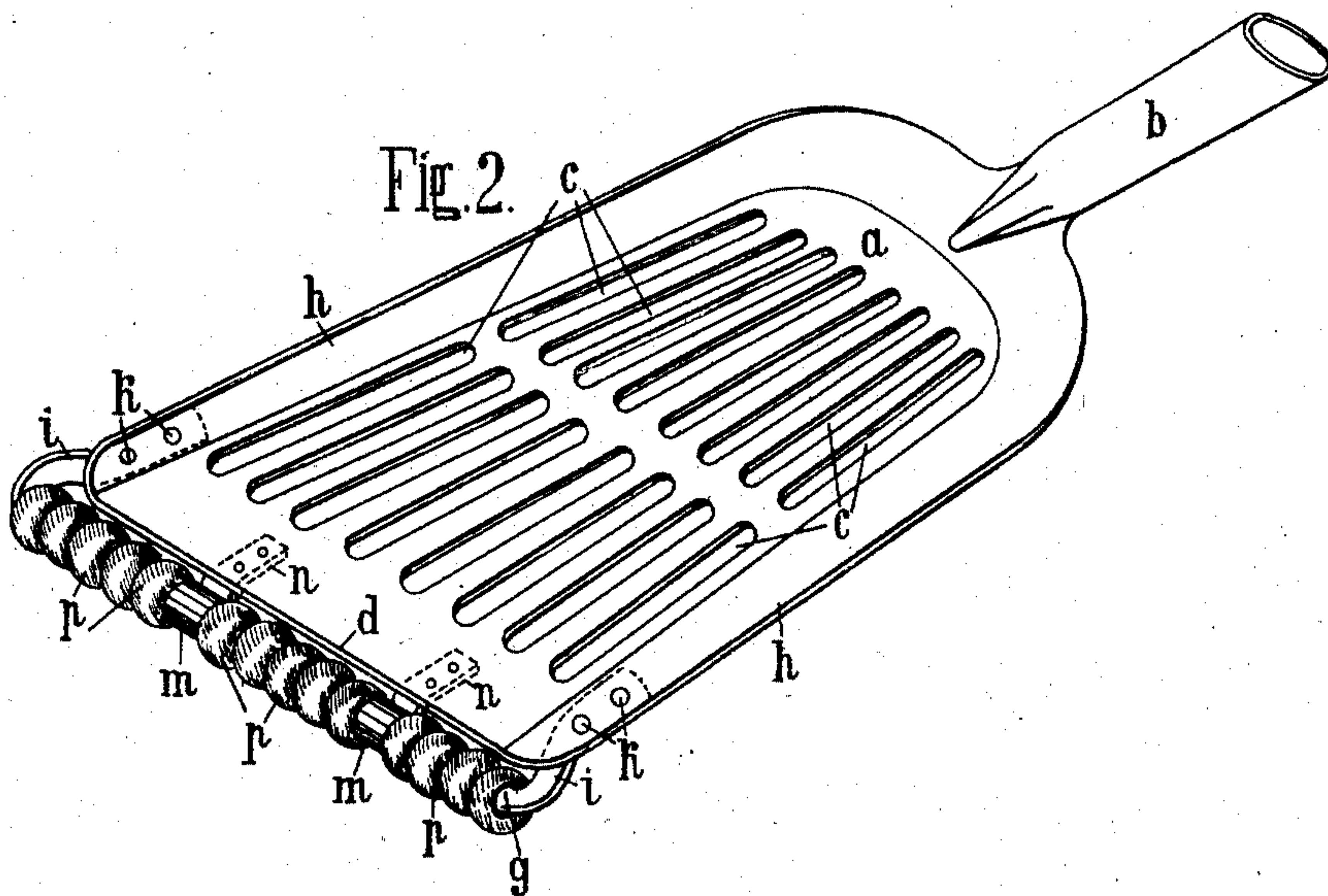
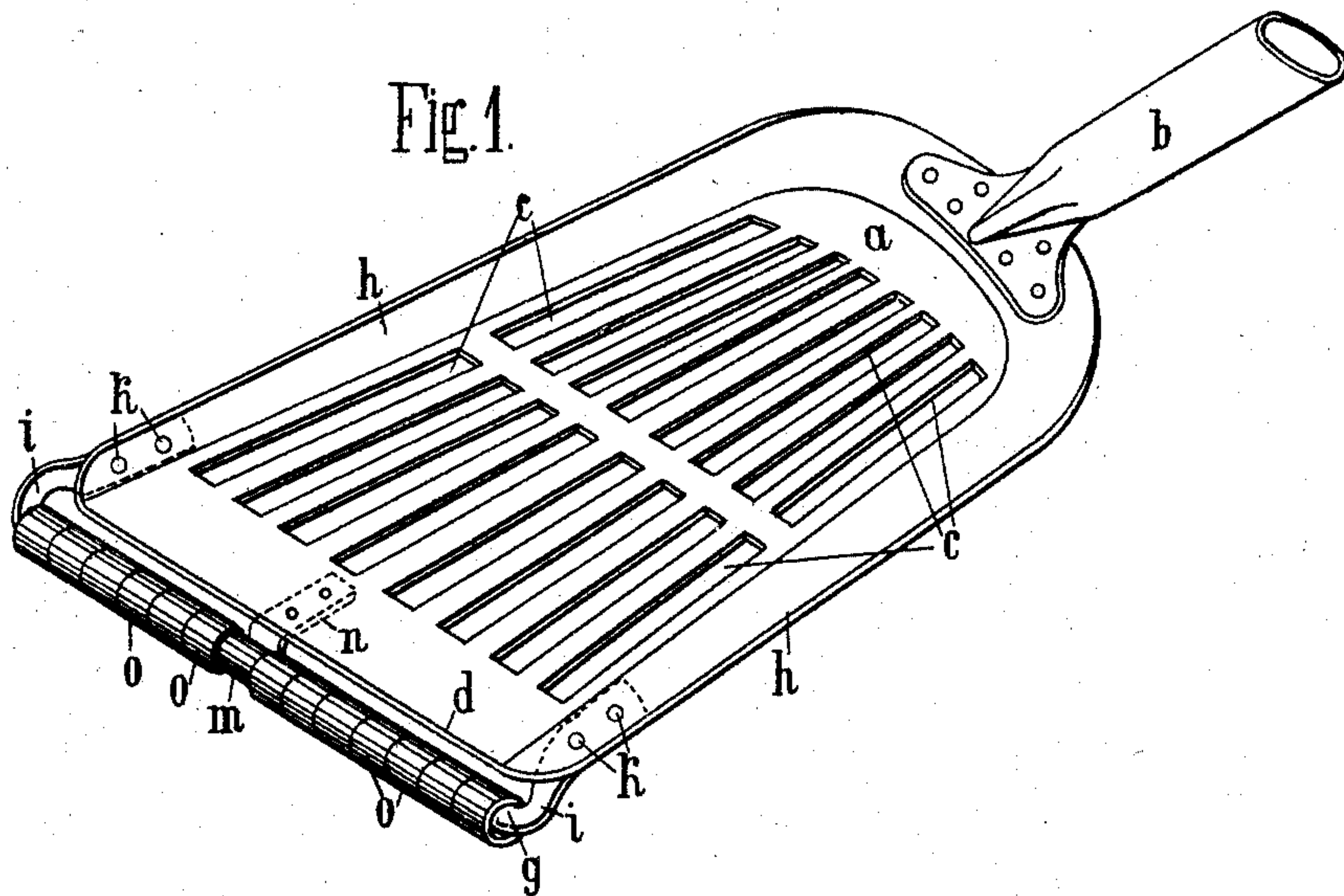
A. SCHULTZE.

SHOVEL.

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928,283.

Patented July 20, 1909.



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ALBERT SCHULTZE, OF RATHENOW-ALBERTSHEIM, GERMANY.

SHOVEL.

No. 928,283.

Specification of Letters Patent.

Patented July 20, 1909.

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To all whom it may concern:

Be it known that I, ALBERT SCHULTZE, a subject of the German Emperor, and residing at Rathenow-Albertsheim, Germany, have invented certain new and useful Improvements in Shovels, of which the following is a specification.

The subject-matter of my present invention is an improved shovel particularly adapted for shoveling potatoes and other small bodies.

Wooden shovels known heretofore for shoveling potatoes, for example, had the disadvantage that when new, their front edges were so thick that it was difficult to shovel the potatoes. When worn thin, however, the potatoes were split by the edge. The attempt to remedy this defect, by attaching sheet metal, failed because the pins or rivets did not hold sufficiently well in the wood, so that the sheet metal soon became loose at one or more places, and matter got between the metal and the wood.

The primary object of my invention is to remedy the above described defects in known potato shovels and the like, and in accordance with my invention I provide an axle parallel with the front edge of the shovel, on which axle a row of bodies are mounted revolubly in juxtaposition. These bodies may be of any optional suitable shape, for example cylindrical, conical or the like.

In order that the invention may be clearly understood reference will be made to the accompanying drawing in which two constructional forms are represented by way of example, and in which:

Figure 1 is a perspective view showing one form of my improved shovel having cylindrical bodies on the axle at the front edge, whereas Fig. 2 is a like view of a modified form having spherical bodies on said axle.

Similar reference letters denominate like parts in both views.

As clearly shown in Fig. 1, *a* is the blade preferably made of sheet iron and provided with the handle *b*. Parallel with the front edge *d* of the blade is arranged an axle *g* which I prefer to attach by means of the lugs *i* to the sides *h* by rivets *k* or the like. The axle rests in a bearing *m* which is attached by means of the lug *n* to the bottom face of the blade. On the axle *g* cylindrical

bodies *o* are revoluble. As the top of the axle is approximately level with the top face of the blade the cylinders project somewhat above this face. Consequently the relatively sharp edge *d* can no longer directly hit the objects, such as potatoes, which are to be shoveled, but these are hit by the revoluble bodies *o* and slide over the latter rotating them round the axle *g*. In this manner wear of the bodies *o* is not only almost completely avoided, but also the shoveling of the objects is facilitated.

The blade may be provided with known incisions *c* so that its weight is diminished, and at the same time the sand which is shoveled with the potatoes is able to leave the shovel.

Referring now particularly to the shovel shown in Fig. 2, this differs from that above described only by the axle *g* being provided with spherical bodies *p* which are revoluble on the axle *g*.

The sheet metal of the sides *h* may be bent and provided with a rounded edge in known manner in order to prevent it cutting the potatoes and the like.

What I claim as my invention and desire to secure by Letters Patent is:

1. The hereindescribed shovel, having an axle arranged parallel to the front edge of the blade of the shovel, and a plurality of bodies revoluble on said axle and extending substantially completely across and abreast of such front edge.

2. In a shovel, the combination, with the blade of the shovel, of an axle fixed parallel to the front edge of the blade, and a plurality of bodies in juxtaposition revoluble on said axle and extending substantially completely across and abreast of such front edge.

3. In a shovel, the combination, with the blade of the shovel, of an axle fixed parallel to the front edge of the blade, and a plurality of cylindrical bodies in juxtaposition revoluble on said axle and extending substantially completely across and abreast of such front edge.

In testimony whereof, I affix my signature in the presence of two witnesses.

ALBERT SCHULTZE.

Witnesses:

HENRY HASPER,
WOLDEMAR HAUPT.