A. A. REGNIER.

GRAVEL SCREEN.

APPLICATION FILED APR. 15, 1911.

995,567. Patented June 20, 1911.

Fig. 1.

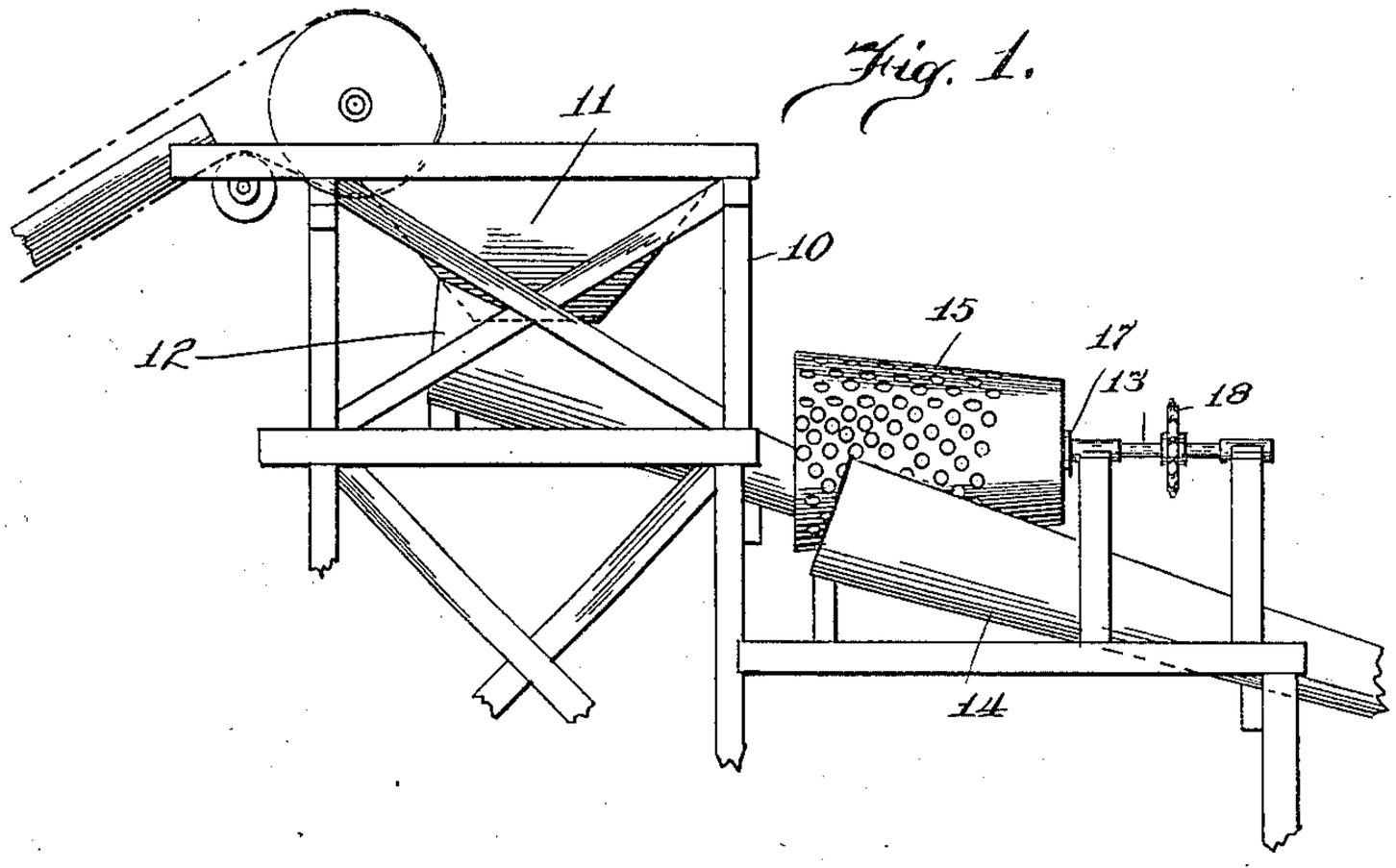


Fig. 2.

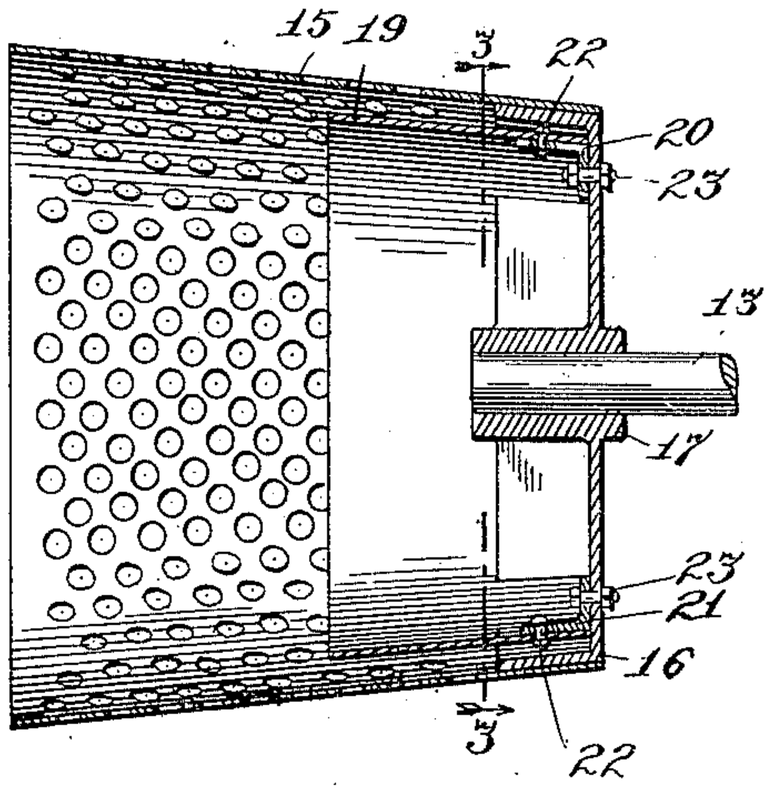
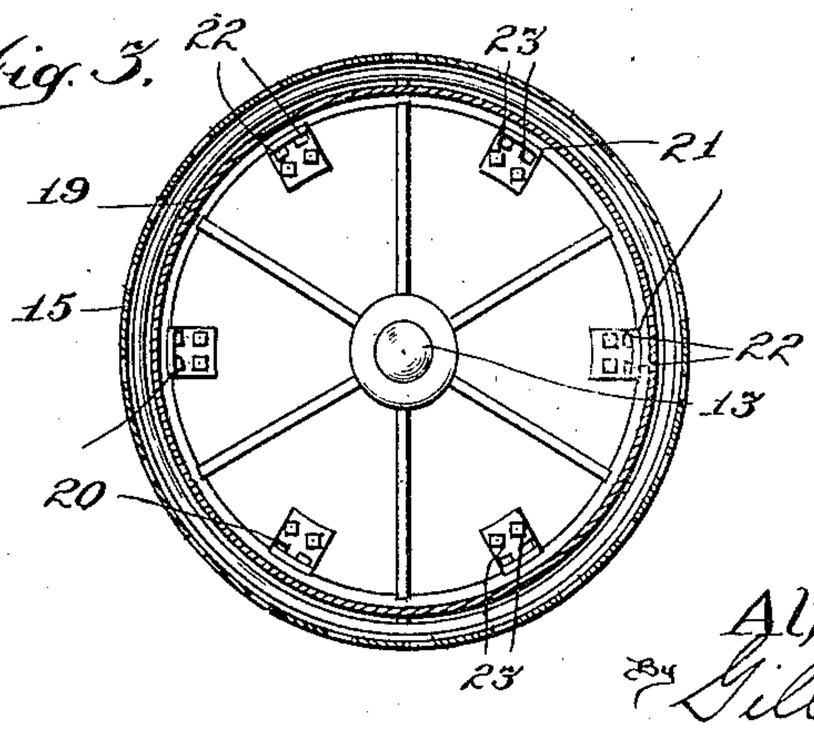


Fig. 3.



Witnesses
Milton Lenoir
E. M. Klatcher

Inventor
Alfred A. Regnier.
By Gillson & Gillson
Attorneys.

UNITED STATES PATENT OFFICE.

ALFRED A. REGNIER, OF AURORA, ILLINOIS, ASSIGNOR TO STEPHENS-ADAMSON MANUFACTURING COMPANY, A CORPORATION OF ILLINOIS.

GRAVEL-SCREEN.

995,567. Specification of Letters Patent. **Patented June 20, 1911.**

Application filed April 15, 1911. Serial No. 621,341.

To all whom it may concern:

Be it known that I, ALFRED A. REGNIER, a citizen of the United States, and resident of Aurora, county of Kane, and State of Illinois, have invented certain new and useful Improvements in Gravel-Screens, of which the following is a specification, and which are illustrated in the accompanying drawings, forming a part thereof.

The invention relates to gravel screens of the type forming a subject of Letters Patent No. 489,380 issued to Franklin T. Gilbert, January 3, 1893.

The object of the invention is to provide a protecting skirt for screens of this character so arranged that it will receive the material and deliver it to the perforated portion of the screen, relieving the latter from the wear incident to the delivering of the material to be operated upon.

A further object is to provide such a skirt which shall be readily removable from the screen to facilitate repairs.

The invention is illustrated in the accompanying drawings, in which—

Figure 1 is a detail elevation of the screen apparatus showing the manner of mounting the screen for service; Fig. 2 is a longitudinal sectional view of the screen, a detail of its supporting shaft being shown; and Fig. 3 is an end view of the screen.

The screen forming the subject of this application is ordinarily employed in connection with an apparatus comprising a frame such as is represented at 10, a receiving hopper 11, a chute 12 receiving material from the hopper and delivering it to the interior of the screen, the latter being mounted upon a horizontal stud-shaft 13, over a receiving-chute 14, which carries the finer parts of the material to a suitable place of delivery, or to another similar screen, not shown.

The screen proper is in the form of a truncated cone, as shown at 15, its small end being secured upon a head 16 provided with a central hub 17 for receiving the end of the shaft 13, a gear-wheel, usually in the form of a sprocket as shown at 18, being mounted upon the shaft and affording means for rotating the screen.

As heretofore constructed, the material has been discharged from the chute 12, which enters the open and larger end of the screen, directly upon the perforated wall of the latter. This material often includes rocks of considerable size and the wear upon the screen has been destructive, and in practice the life of the screen, has been comparatively short.

The present improvement consists in locating within the screen and adjacent its bottom, a sheet metal skirt 19 also in the form of a truncated cone and which may be imperforate as shown in the drawings. The diameter of this skirt is preferably less than the diameter of the screen and it is secured in place by means of angle brackets 20, 21, as many being used as may be found necessary, one arm of each bracket being riveted to the skirt, as shown at 22, and the other arm lying against the inner face of the disk portion of the head 16, and being secured thereto by means of a bolt 23. The length of the skirt 19 is such that the end of the chute 12 may be located within its chamber so that all of the material will be discharged primarily upon the skirt. As the screen revolves, this material is carried with the skirt and falls from the open end thereof upon the perforated screen 15 where the usual riddling action takes place, the finer particles passing through the perforations in the screen and the larger pieces being discharged from its open end.

By this construction the screen is relieved from the impact of the material discharged from the chute and this material is distributed over the wall of the screen in a thin layer and the screening action is thereby facilitated. The screen is thus relieved from the wearing action incident to the impact of the material and repairs may be quickly and cheaply made by removing the worn skirt and inserting a new one.

I claim as my invention—

1. A screen comprising, in combination, a perforated conical wall, a head fixed upon the smaller end of the wall and having a central hub, and an annular flaring skirt within and of less length than the perforated wall and being secured to the head.

2. A screen comprising, in combination, a

perforated conical wall, a head fixed upon the smaller end of the wall and having a central hub, and an annular flaring skirt of imperforate sheet metal secured to the head.

3. In a screen, in combination, a head having a central axial hub, a perforated flaring wall secured to the head, and an annular flaring skirt removably secured to the head within the perforated wall and being of less length than the latter.

ALFRED A. REGNIER.

Witnesses:
EARL P. CALKINS,
CARL A. KRAUSE.