

(No Model.)

D. M. McKINNON.
GRAIN SCOURER AND CLEANER.

No. 429,945.

Patented June 10, 1890.

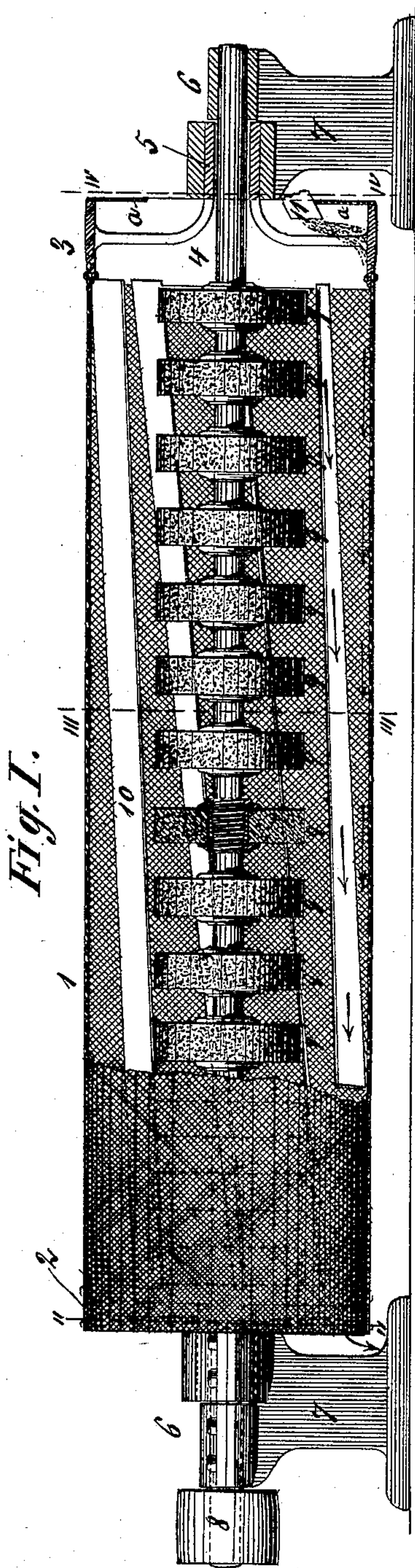


Fig. I.



Fig. V.

Fig. II.

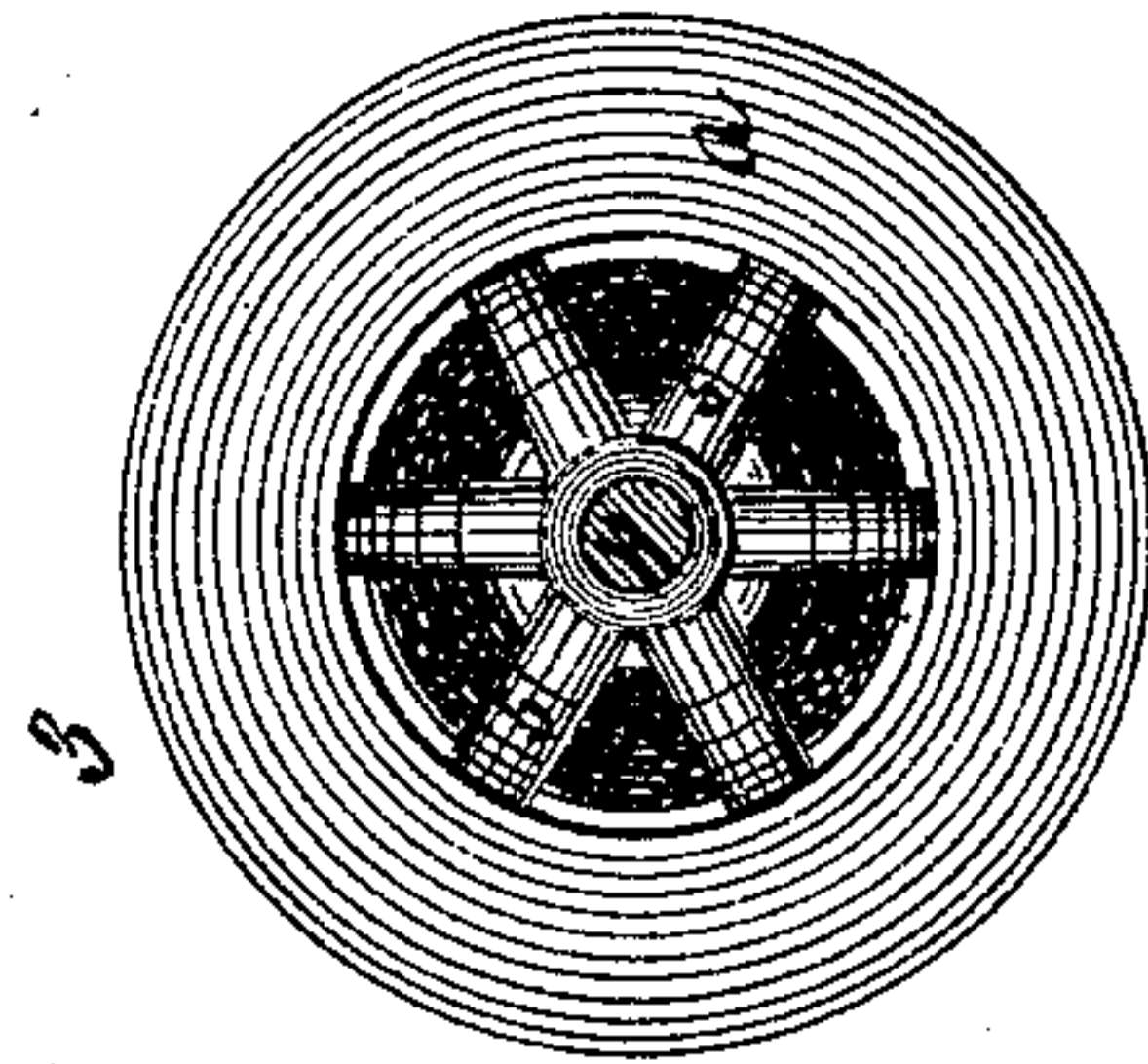


Fig. III.

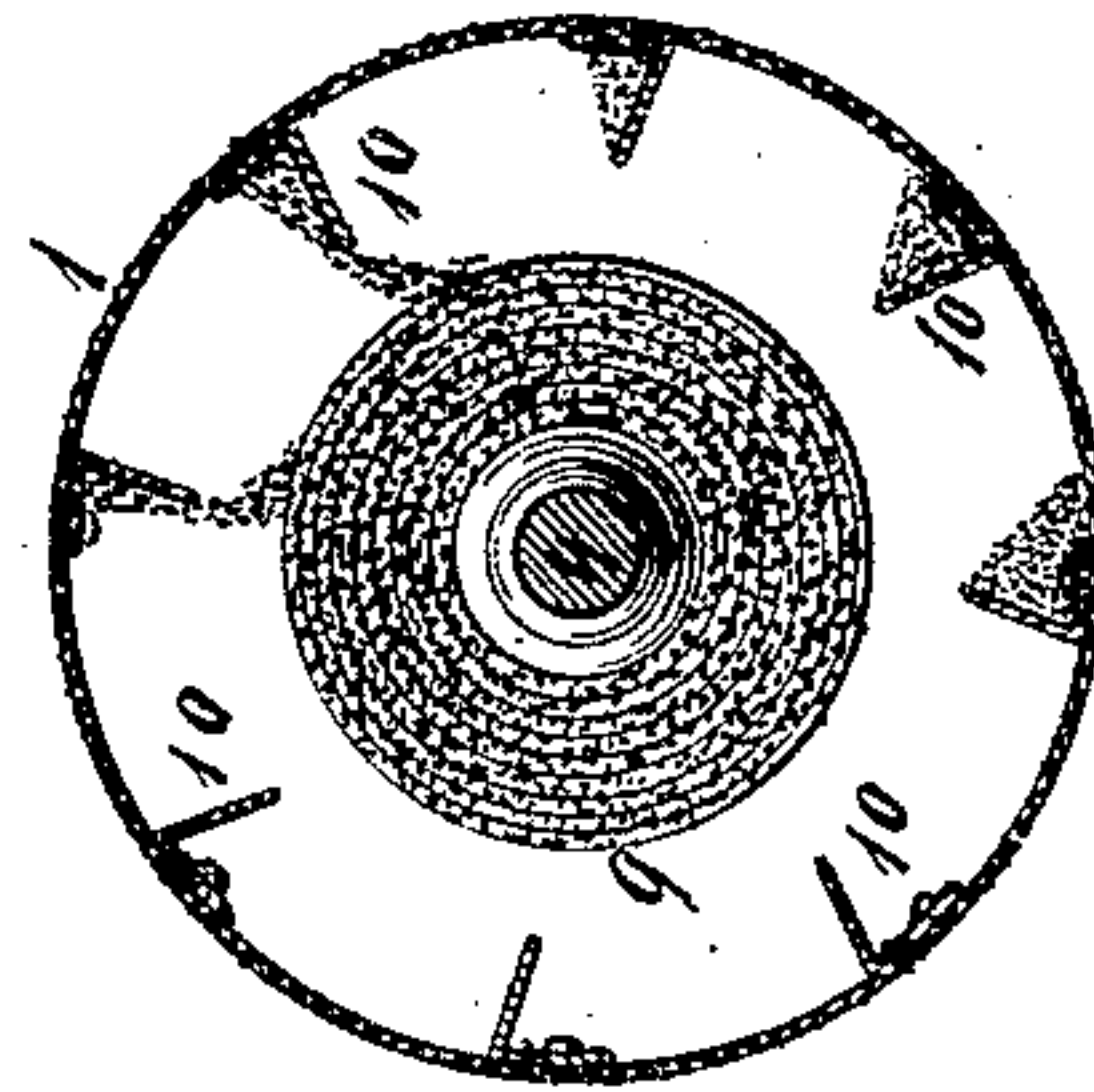


Fig. IV.

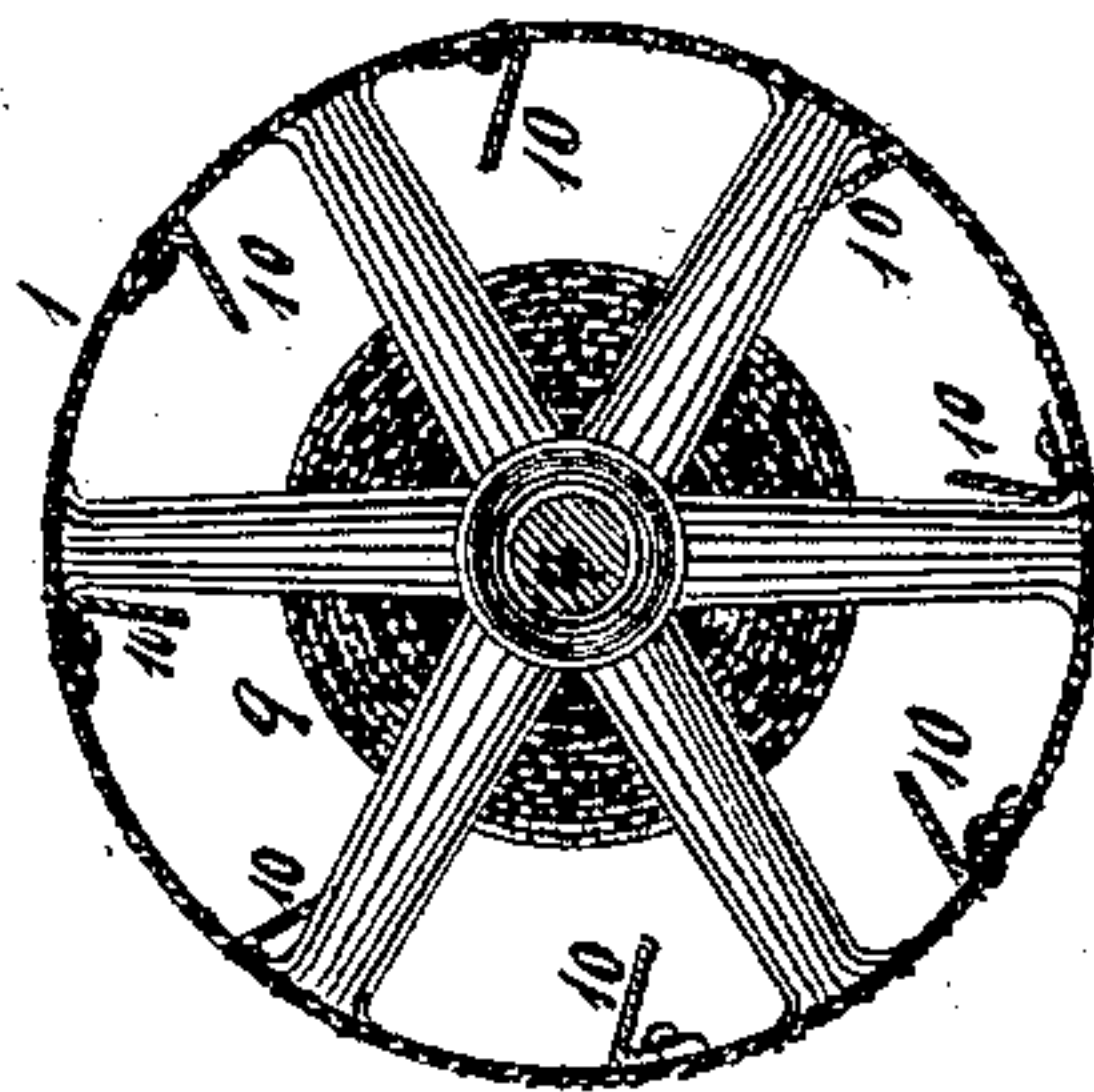
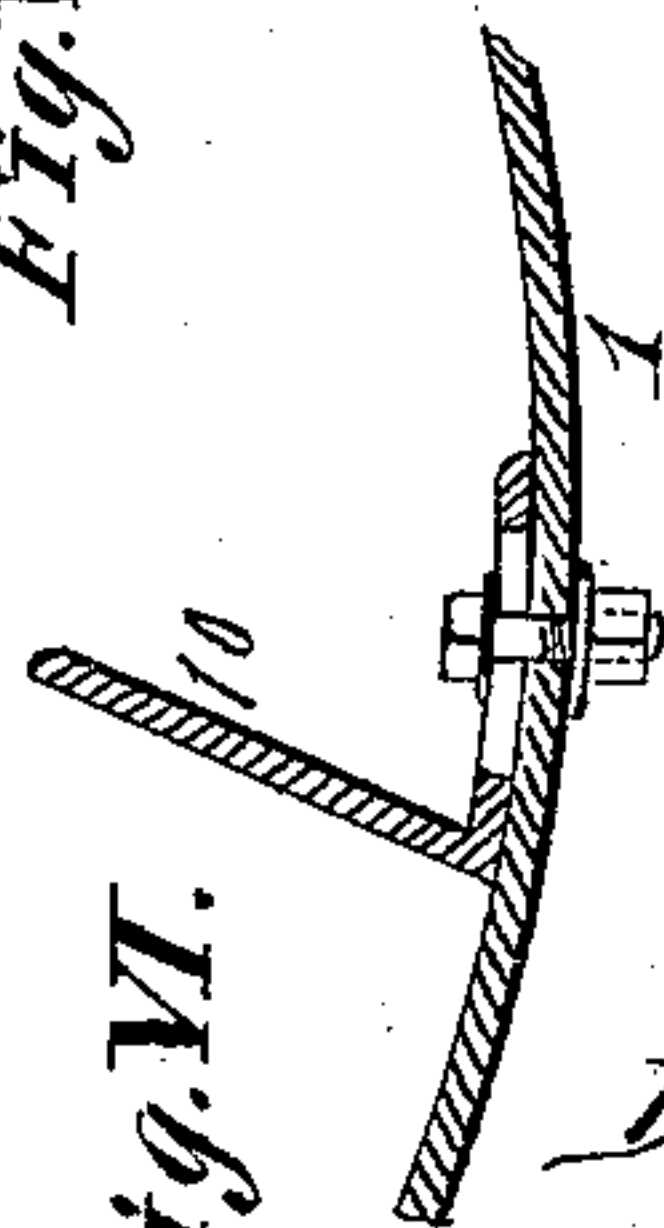


Fig. VI.



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DANIEL M. McKINNON, OF EDWARDSVILLE, ILLINOIS.

GRAIN SCOURER AND CLEANER.

SPECIFICATION forming part of Letters Patent No. 429,945, dated June 10, 1890.

Application filed September 7, 1889. Serial No. 323,253. (No model.)

To all whom it may concern:

Be it known that I, DANIEL M. McKINNON, of Edwardsville, in the county of Madison and State of Illinois, have invented a certain new and useful Improvement in Grain Scourers and Cleaners, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming part of this specification.

My invention relates to an improved device for scouring and cleaning grain; and my invention consists in features of novelty hereinafter fully described, and pointed out in the claim.

Figure I is a view of my improved scourer and cleaner, part in elevation and part in longitudinal section. Fig. II is a vertical transverse section taken on line II II, Fig. I. Fig. III is a vertical transverse section taken on line III III, Fig. I. Fig. IV is a vertical transverse section taken on line IV IV, Fig. I. Fig. V is a longitudinal view of one of the plates, and Fig. VI is a detail section showing the manner of adjusting the plates.

Referring to the drawings, 1 represents a cylinder consisting, preferably, of perforated metal or wire-gauze and supported on heads 2 3, by which it is loosely mounted on a central shaft 4. The heads preferably consist of spiders having outer rims, to which the cylinder is secured, and inner hubs 5, which form the journal-supports of the cylinder. The head 3 is in the form of a pulley adapted to receive a belt by which the cylinder is turned, and to the outer end of said pulley a disk *a* is secured for the purpose of confining the grain to the cylinder. The shaft 4 is journaled in boxes 6, secured to standards 7, and this shaft is provided with a driving-pulley 8. On the shaft within the cylinder, are a number of disks or wheels 9, suitably secured to the shaft, so as to revolve with it. These disks are preferably placed a slight distance apart, as shown in Fig. I, and are preferably made of emery or a suitable body faced with emery.

On the inside of the cylinder 1 are arranged a number of plates 10, preferably placed di-

agonally, as shown, and adapted to be adjusted as shown in Fig. VI, and projecting inwardly from the face of the cylinder, as represented in Figs. II and III.

The material to be scoured or cleaned is introduced at one end of the cylinder by a suitable spout 11, and it is discharged at the other end of the cylinder.

The operation is as follows: The shaft carrying the disks and the cylinder are made to revolve either in the same or opposite direction, but with differential speeds. The grain which is deposited through spout 11 inside of head 3 is carried upward by the plates 10 and dropped, as shown in Fig. III, onto the disks, which clean and scour it, and it is thus being carried up and dropped continuously in its passage from the receiving to the delivery end of the machine. By making the cylinder perforated it affords means for the escape of dust and dirt removed from the stuff being treated.

A machine thus constructed is very cheap and durable and effectually performs the functions for which it is intended.

It might be possible to dispense with the use of the plates 10, as the stuff would naturally be carried up by the turning of the cylinder, and in falling would come in contact with the disks 9; but I much prefer to use the plates, as I believe better results would be obtained.

I claim as my invention—

In a grain scourer and cleaner, the combination of the cylinder 1, loosely mounted on shaft 4, and consisting of a perforated sheet-metal shell riveted to heads 2 3, one of said heads 3 being a band-pulley provided on its outer end with a disk *a*, for retaining the grain, diagonally-arranged lifting-plates 10, adjustably secured to the inside of the cylinder, a central shaft, and scouring-disks secured to said shaft, all substantially as herein set forth.

DANIEL M. McKINNON.

In presence of—

JOHN T. LOVE,
W. M. WARNOCK.