

(No Model.)

G. G. HUNT.  
WHEEL FOR HARVESTERS.

No. 331,971.

Patented Dec. 8, 1885.

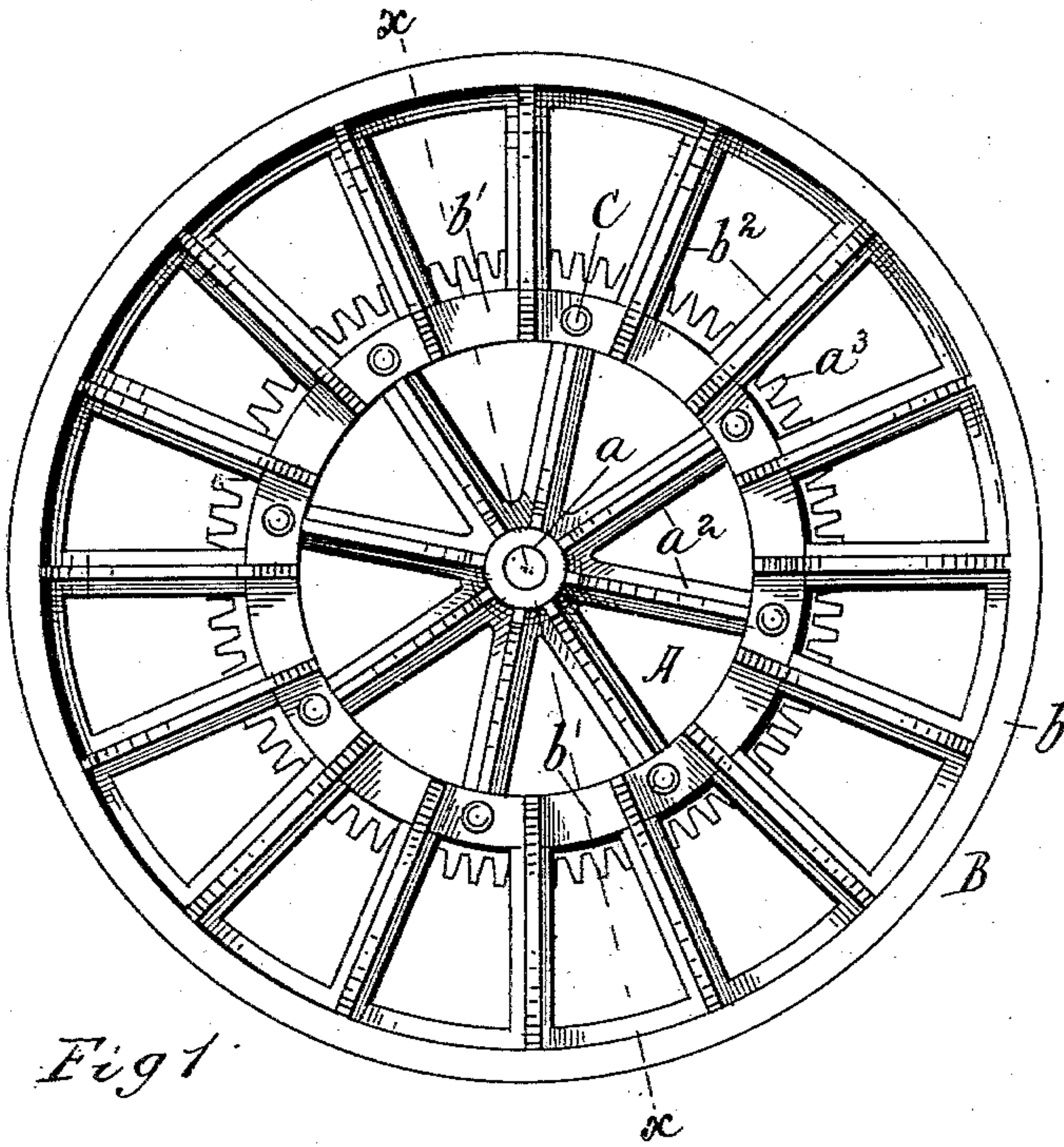


Fig 1

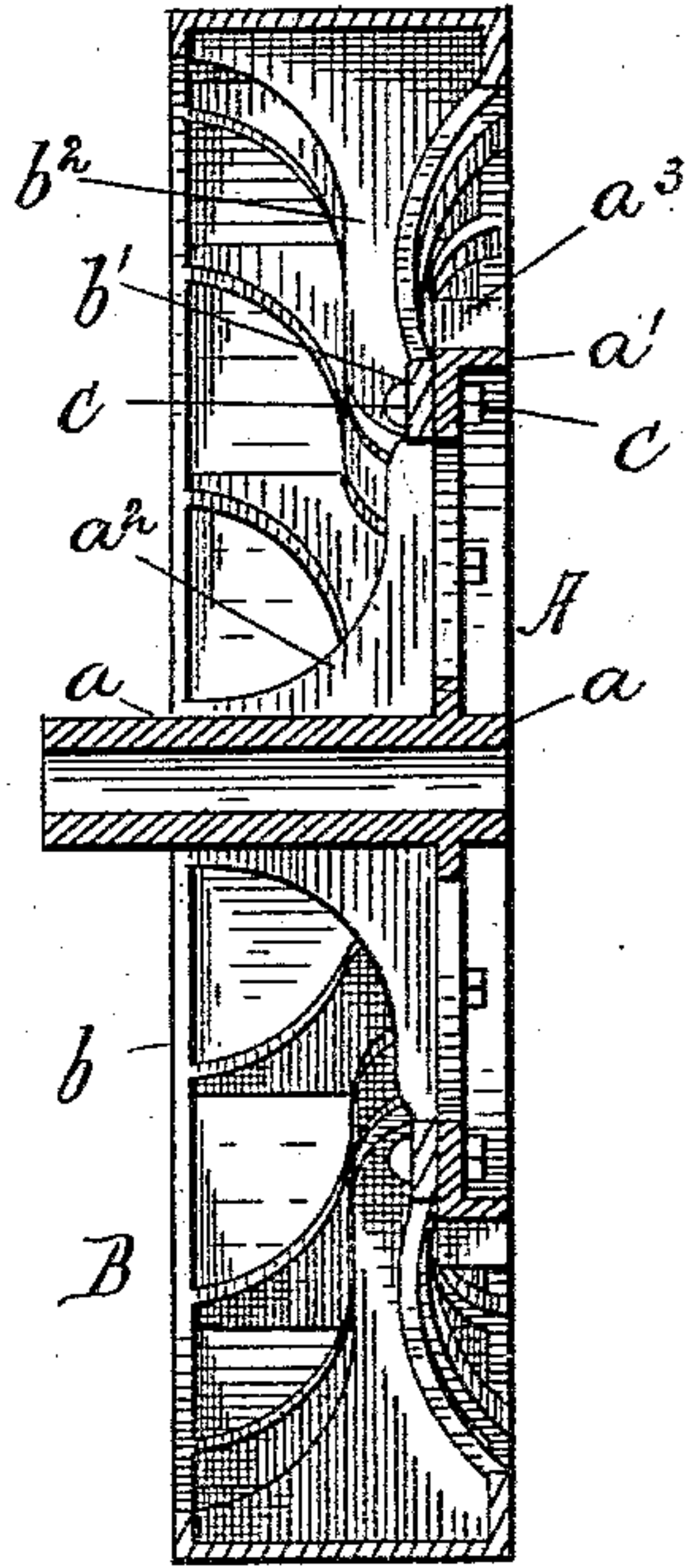


Fig 2

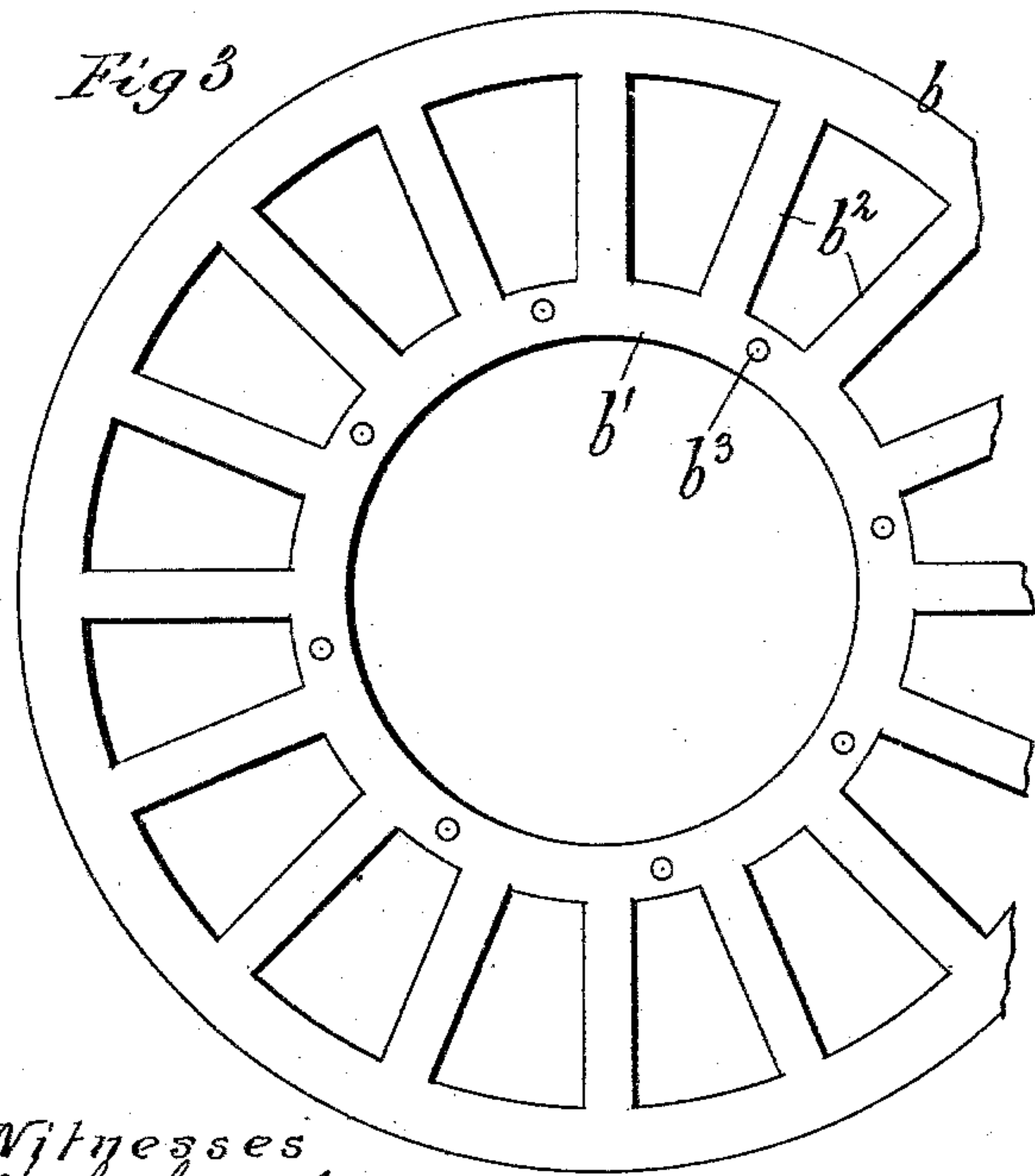


Fig 3

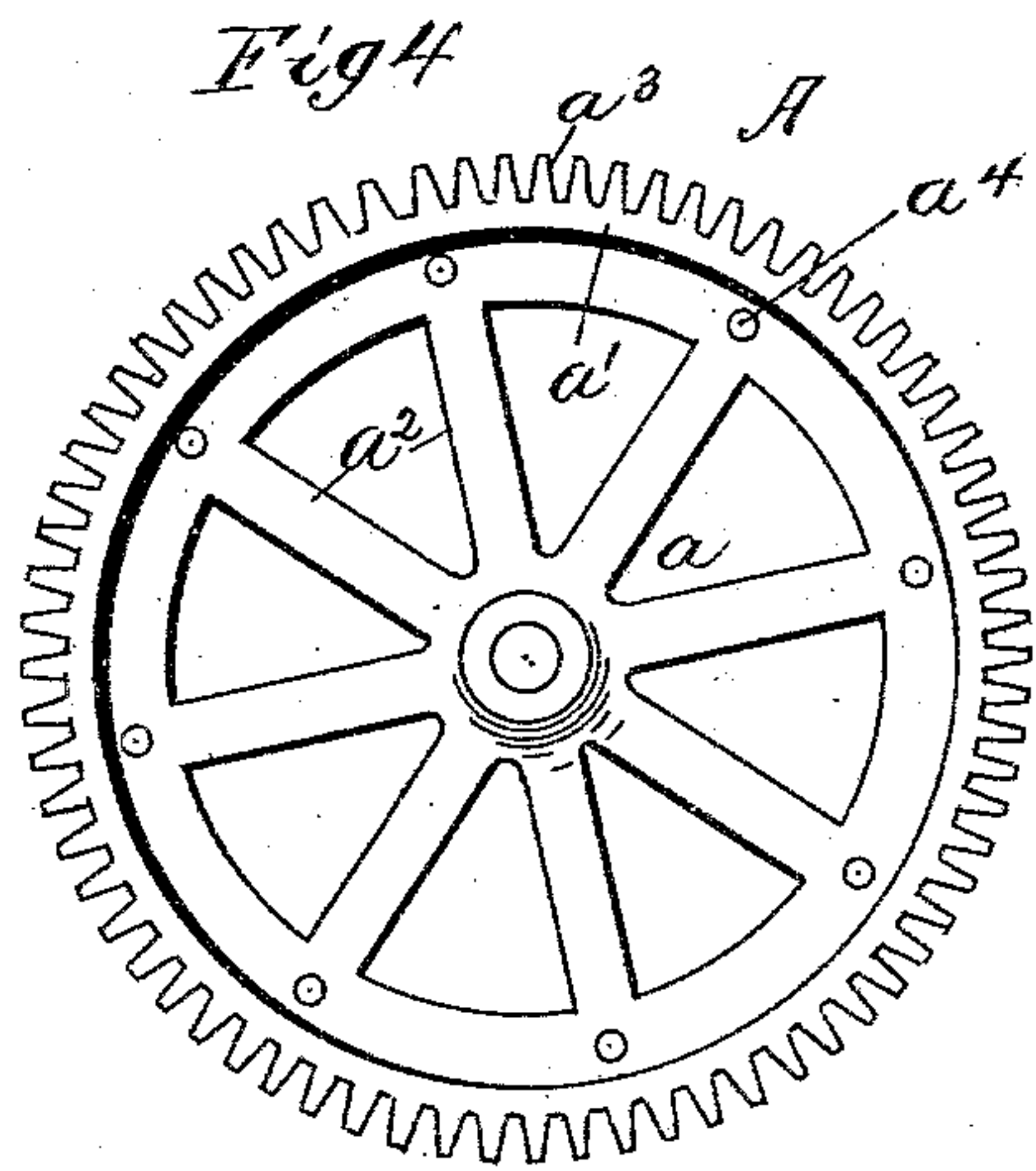


Fig 4

Witnesses  
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# UNITED STATES PATENT OFFICE.

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## WHEEL FOR HARVESTERS.

SPECIFICATION forming part of Letters Patent No. 331,971, dated December 8, 1835.

Application filed October 5, 1885. Serial No. 179,090. (No model.)

*To all whom it may concern:*

Be it known that I, GEORGE G. HUNT, a citizen of the United States, residing at Bristol, in the county of Kendall and State of Illinois, have invented certain new and useful Improvements in Main Wheels for Harvesters, which are fully set forth and described in the annexed specification, reference being had to the accompanying drawings, in which—

Figure 1 represents a front elevation of a wheel embodying my improvements; Fig. 2, a transverse section of the same, taken on the line  $x x$ , Fig. 1; Fig. 3, a rear elevation of the tire-section of the wheel, and Fig. 4 a similar elevation of the gear and hub section.

My invention relates to the main or ground wheel for harvesting-machines, which, as is well known, is also the drive-wheel by which motion is communicated to other parts of the machine.

The invention consists in the construction of the wheel in two concentric parts or sections, whereby the wheel is more easily handled in casting and drilling, and other work in fitting up for use, and shrinkage-strains are greatly reduced.

The improvement of course relates to metallic wheels, which have heretofore been produced by casting in one piece.

In the drawings, A represents the hub and gear section of the wheel, and B the tire-section of the same wheel. These two parts are cast entirely independent of each other. The first-named section consists of the hub  $a$  and a concentric ring,  $a'$ , connected to the hub by spokes  $a^2$ . The ring is right-angled in section, one part standing in a plane perpendicular and the other in a plane parallel, to the hub, as shown in Fig. 2 of the drawings. On the rim of this ring are the teeth  $a^3$  of the usual driving-gear, which is attached to the main wheel, and through the perpendicular portion of the ring are bolt-holes  $a^4$ . These parts are all cast in one piece, the bolt-holes being also preferably cast, though this is not essential. The hub  $a$  is afterward carefully drilled for the axle. This operation is easily performed, for the reason that the section is comparatively small, and therefore may be readily handled

and requires only a small platform. When the wheel is cast entire, a large bed or platform is required for it in drilling, and it is heavy and inconvenient to handle.

The section B of the wheel consists of the tire  $b$  and a concentric ring,  $b'$ , perpendicular to the tire, and these two parts are united by short spokes  $b^2$ . The diameter of the ring  $b'$  corresponds to that of the ring  $a'$  of the hub-section, so that the two may be applied to each other face to face, as shown in Fig. 2 of the drawings. The ring  $b'$  is also provided with bolt-holes  $b^3$ , which correspond to the similar holes in the ring  $a'$ , and these parts are all cast together to form the tire-section, as shown in Fig. 3 of the drawings, the bolt-holes being preferably made in the process of casting. The tire-section is also readily handled for cleaning and any other operation that may be necessary in fitting up the wheels for use.

The two parts of the wheel are fastened together by applying the hub-section to the inside face of the tire-section, bringing the two rings  $a'$  and  $b'$  together throughout their circumference, and securing them in this position by bolts C, passed through the holes in the respective rings and secured by suitable nuts, as shown in Fig. 2 of the drawings. It will thus be seen that a complete wheel is formed, ready for use in the usual way on a harvesting-machine.

In addition to the ready casting and handling of the wheel when made in sections, as described, I am also enabled to bore the hub with greater accuracy in the smaller pieces, and also save any waste if one part of the wheel is broken. Breakage of the gear-section sometimes occurs in these wheels, and when they are cast entire of course the whole wheel is lost even by the breaking of a few teeth on the gear-section. With my improvement, however, it is obvious that such an accident will only necessitate the loss of the hub or inner section, which may be replaced by another similar section. So, too, if the tire should be injured, it may be replaced, while the inner or hub section is retained. An important advantage is also gained by my improvement in



obviating the danger of fracture from shrinkage-strains.

When these wheels are cast entire with long spokes from the tire to the hub, it is almost impossible to secure uniform shrinkage in cooling, and quite often a spoke will be fractured as the wheel becomes cold. With my improvement, however, the danger is almost entirely obviated. The tire-section, having an open center and short spokes, will shrink more uniformly in cooling, and what little strain occurs will be borne with safety. The same remark applies to the hub and gear section. It is a comparatively small casting, the spokes are short, and it will cool with little danger of fracture.

I do not wish to be understood as limiting myself precisely to the details of construction described and shown herein, for there may be modifications in the form of the two sections of the wheel, and the special devices by which they are adapted to be fastened together may

be changed without modifying the main feature of the improvement.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In a main wheel for harvesters, the tire-section cast in one piece, and a separate hub and gear section, also cast in one piece and secured by suitable fastenings to the tire-section, substantially as and for the purposes set forth.

2. In a main wheel for harvesters, the section A, composed of the hub *a* and angular gearing *a'*, cast in one piece, in combination with the section B, composed of the tire *b* and ring *b'*, cast in one piece, and the fastening-bolt C, securing the rings *a'* and *b'* together, substantially as and for the purposes set forth.

GEORGE G. HUNT.

Witnesses:

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