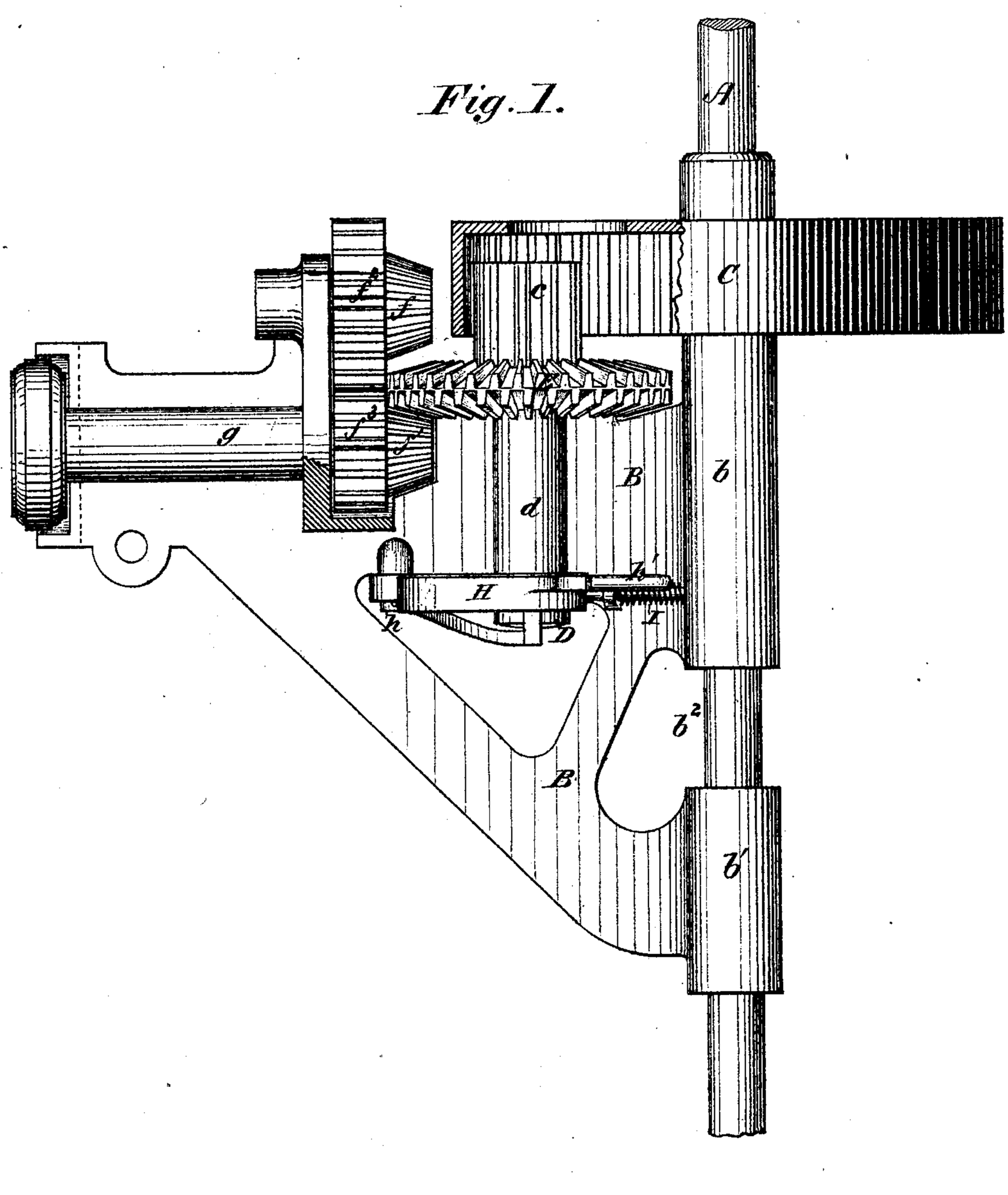
2 Sheets--Sheet 1.

John P. Manny,

HARVESTER.

No. 121,881. Patented Dec. 12, 1871.

Fig. 1.



Witnesses:

T. C. Brecht.

Wm. H. Rowe,

Inventor:

John P. Manny

by his Atty

Wm. D. Baldwin

2 Sheets--Sheet 2.

John P. Manny,
HARVESTER.

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Fig. 2.

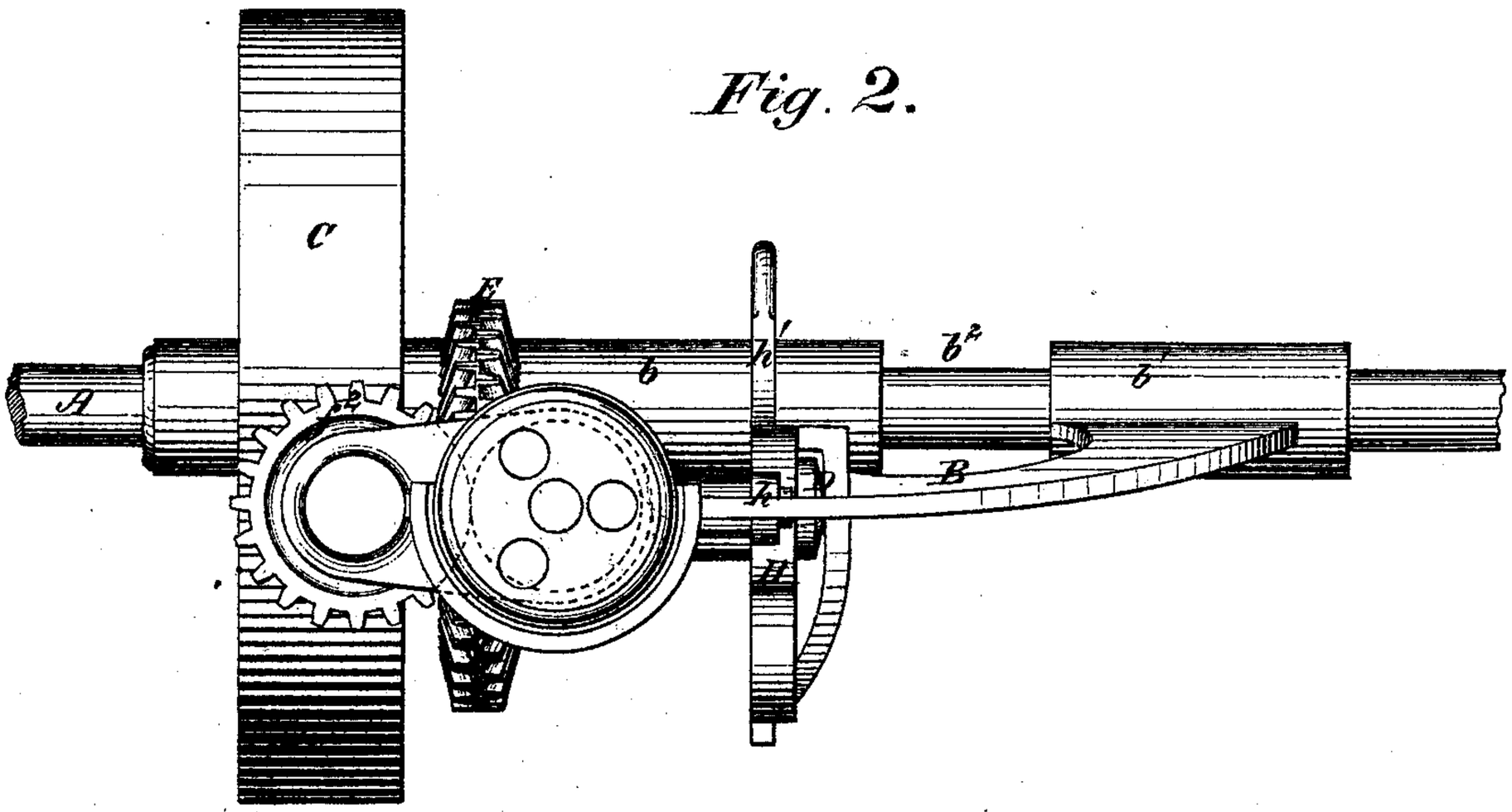
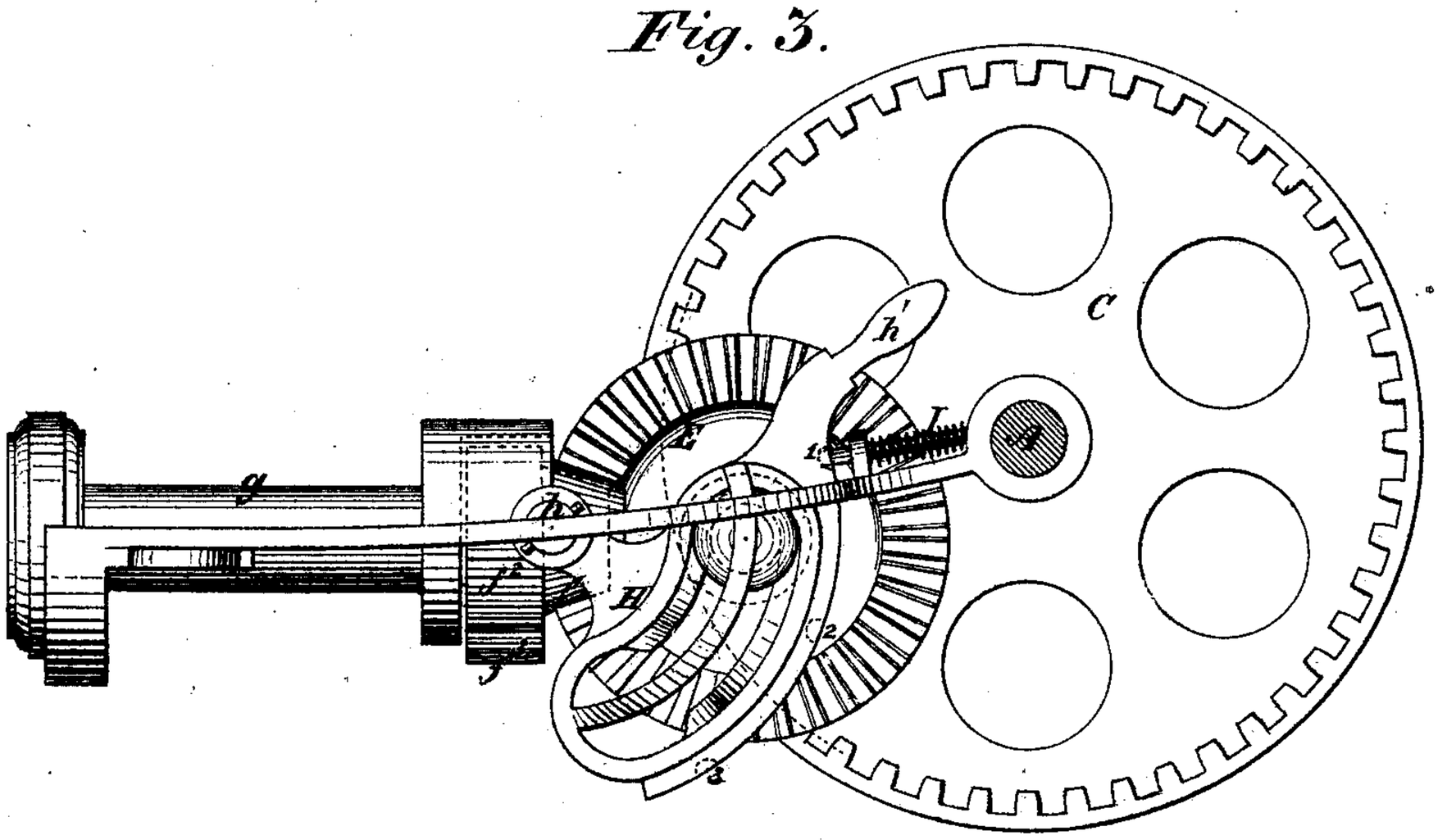


Fig. 3.



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UNITED STATES PATENT OFFICE.

JOHN P. MANNY, OF ROCKFORD, ILLINOIS.

IMPROVEMENT IN HARVESTER-GEARINGS.

Specification forming part of Letters Patent No. 121,881, dated December 12, 1871; antedated November 30, 1871.

To all whom it may concern:

Be it known that I, JOHN P. MANNY, of Rockford, in the county of Winnebago and State of Illinois, have invented certain new and useful Improvements in Harvesters, of which the following is a specification, taken in connection with the accompanying drawing, which shows so much only of a harvester as is necessary to illustrate the invention herein claimed, although, in practice, my improvements would be used in connection with a fully organized harvesting-machine.

Figure 1 represents a plan; Fig. 2, a rear elevation; and Fig. 3, a side elevation.

My invention relates to the gearing of a harvester; its object is to change the speed from the slow motion used in reaping to a fast one when mowing, or vice versa; and the improvement consists in a novel construction of gearing, consisting of a wheel beveled on both faces and sliding between two corresponding pinions operating gear-wheels of different sizes, as hereinafter set forth. My invention further consists in combining a swinging skeleton eccentric-shipper and a detent, with the gearing, as hereinafter set forth.

The main axle A turns freely in the sleeves *b* b^1 of a gear-frame, B, swinging freely round the axle. I usually drive a self-raker by means of a gear mounted on the axle in the space b^2 between the sleeves *b* b^1; but such gear is not shown in the drawing, as it constitutes no part of the subject-matter herein claimed. An internally-geared spur-wheel, C, fast on the main axle, drives a spur-pinion, *c*, fast on a shaft, D, sliding endwise, and turning freely in a long box, *d*, in the gear-frame. A gear-wheel, E, beveled on each face, is also mounted on this shaft, and alternately engages with one of two bevel-pinions *f* f^1. One of these pinions, f^1, is mounted on the crank-shaft which runs in a long box, *g*, on the frame, and drives the cutter in the usual way by a crank and pitman. This gearing produces the ordinary motion used in reaping, and ordinarily this motion is sufficiently rapid for mowing. The bevel-gears *f* f^1 are of equal size. The gear *f* is mounted on a short shaft carrying a spur-wheel, f^2, gearing into a pinion, f^3, of similar size, on the crank-shaft, to give a faster motion to it. An eccentric skeleton shipping-frame, H, oscillates around a pivot, *h*, on the gear-frame, being moved by a handle, *h'*. A cam-yoke on the shipper slides in a groove on the collar and moves the shaft endwise. A spring-detent, I, takes into notches on the back of the shipper to lock it in any desired position. Three notches, 1 2 3, are shown in this instance with the shipper locked by its upper notch 1, in which position the slow-motion is in gear. When the shipper is locked by the second notch the shaft *d* has moved inward far enough to clear the gears on either side and the gearing stops. When locked into the lower notch 3 the fast-motion is thrown into gear.

I thus secure a compact, simple, and effective arrangement of devices for changing the speed, for throwing the mechanism into or out of gear, and for securing the steady running of the gearing, all the bearings being long and contained in one frame, by preference of metal.

I claim as my invention—

1. The combination of the endwise-moving rotating shaft, the wheel mounted on said shaft and beveled on both faces with two bevel-gears of uniform size, mounted on independent parallel shafts carrying spur-wheels of differing sizes gearing with each other, all these members being constructed and operating as described to vary the speed of the cutters.

2. The combination of the endwise-moving shaft, the swinging eccentric skeleton shipper, and its spring-detent, all these members being constructed, arranged, and operating as described.

In testimony whereof I have hereunto subscribed my name.

JOHN P. MANNY.

Witnesses:

JOE. I. PEYTON,

WM. D. BALDWIN.

(74)