

G. Petersen.
Straw Cutter.

N^o 90,295.

Patented May 18, 1869.

Fig. 1.

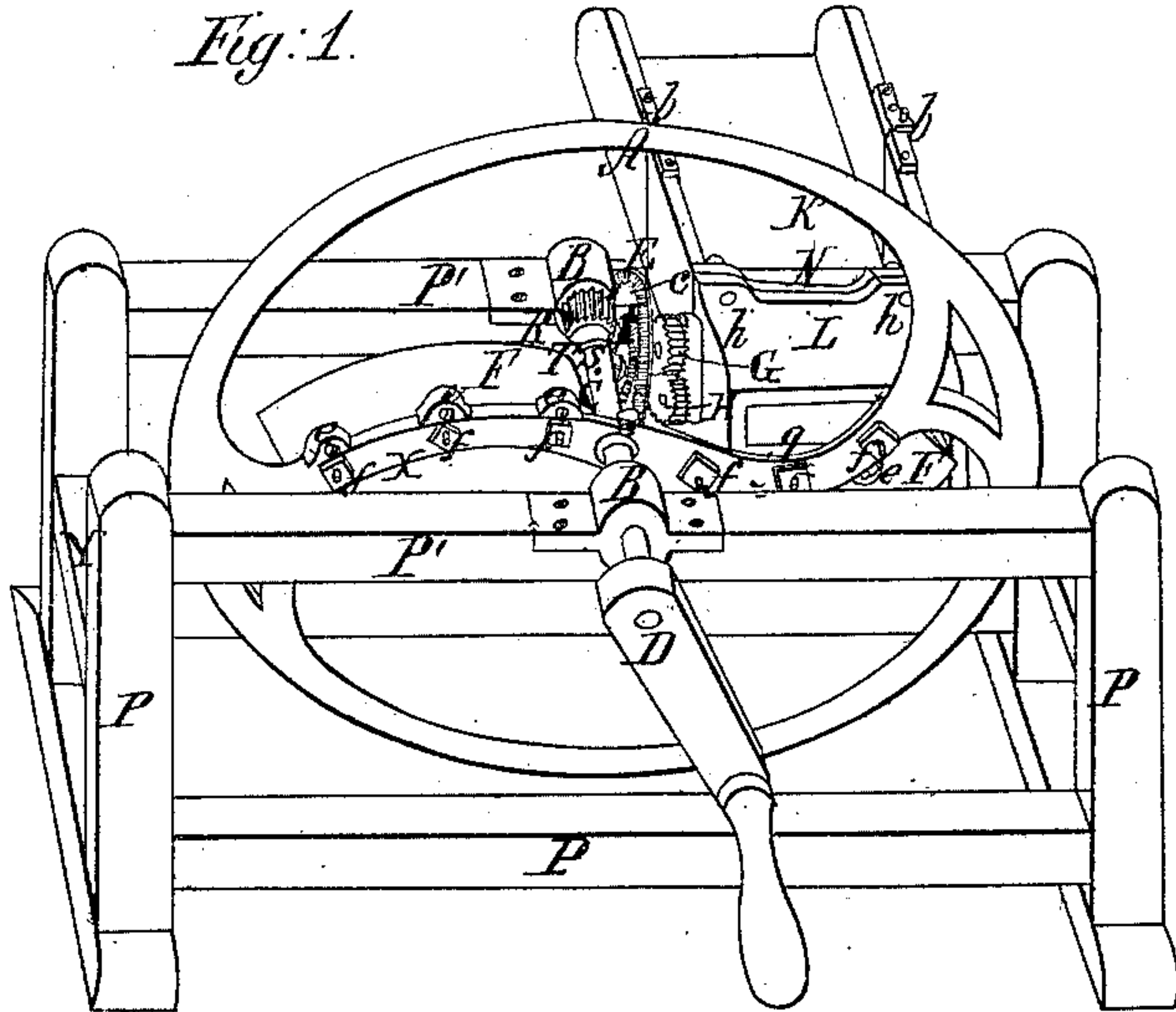


Fig. 2.

Fig. 3.

Fig. 6.

Fig. 5.

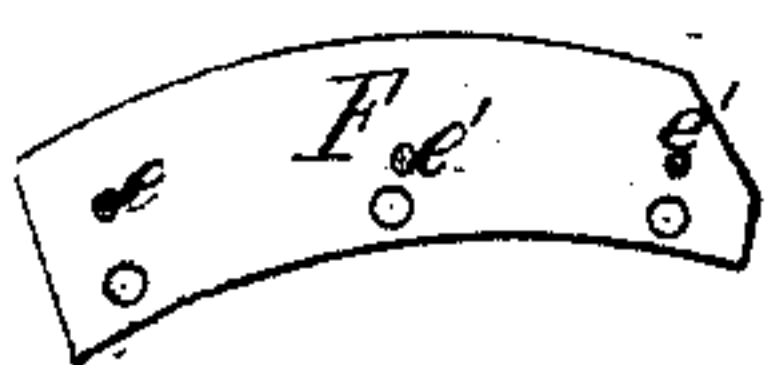
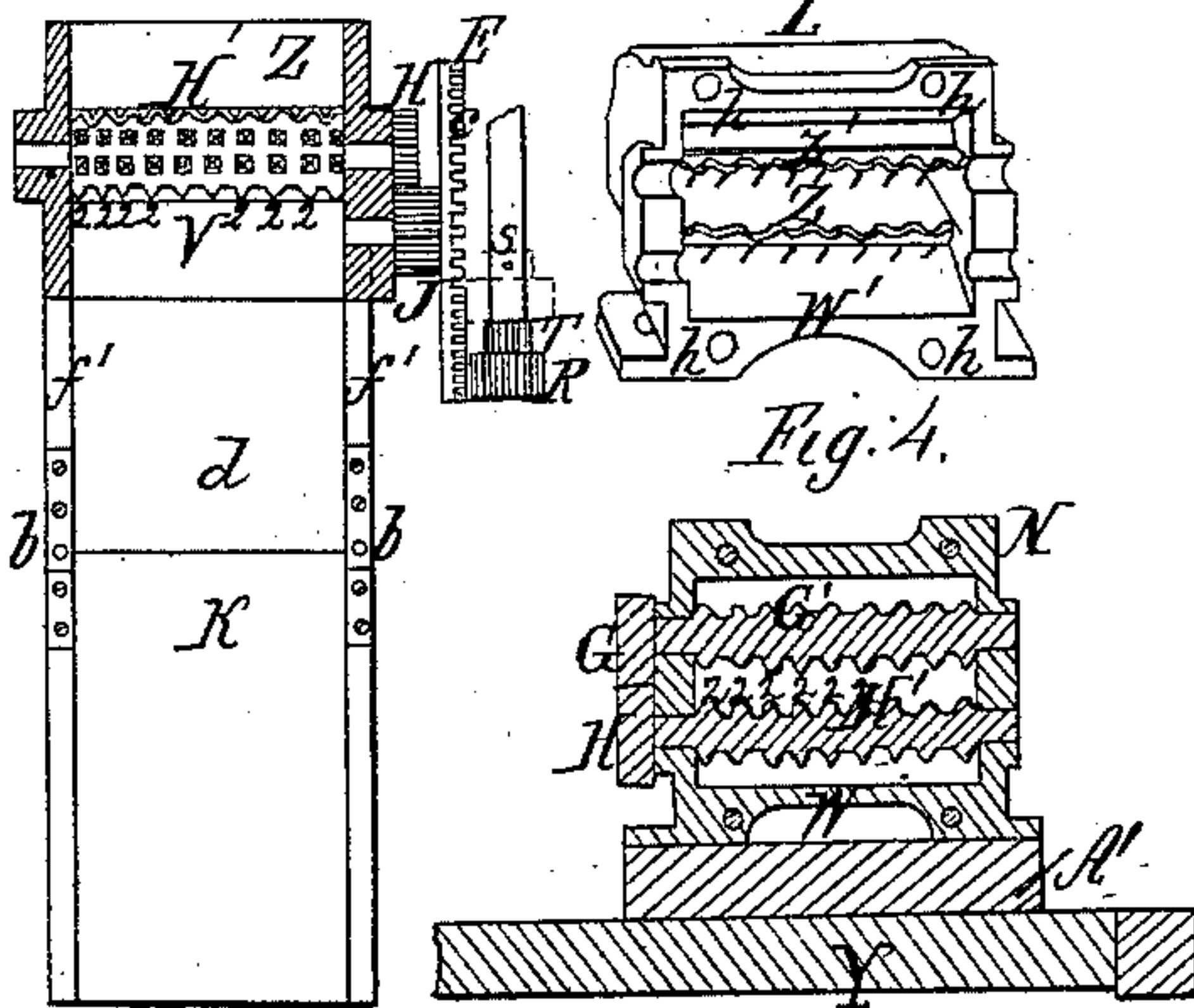


Fig. 7.



Witnesses;
Geo L Chapin
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United States Patent Office.

G. PEDERSEN, OF CHICAGO, ILLINOIS.

Letters Patent No. 90,295, dated May 18, 1869

IMPROVEMENT IN STRAW AND FEED-CUTTERS.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that I, G. PEDERSEN, of Chicago, in the county of Cook, and State of Illinois, have invented a new and useful Improvement in Straw and Feed-Cutters; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawings, and letters marked thereon, making a part of this specification, in which—

Figure 1 is a perspective representation of a straw and feed-cutter having my improvement attached.

Figure 2, a horizontal sectional view of the cutting-box and one of the feed-cylinders.

Figure 3, a perspective view of the inside of the cylinder-box removed from the cutting-box, showing the toothed plates corresponding to the teeth or projections on the feed-cylinders.

Figure 4, a longitudinal section of the feed-cylinders, and an elevation of the end of the cutting-box, with the cylinder-box removed.

Figure 5, a view of one of the knives removed from the arm of the wheel.

Figure 6 shows a section of one of the knives, an arm of the wheel, and the screws for setting the knife.

Figure 7, a transverse section of one of the feed-cylinders, showing the form of the teeth or projections.

The nature of the present invention consists in the novel construction of a cylinder-box, and its combination with peculiarly-constructed feed-cylinders, and with gearing, so arranged as to run the said cylinders at different rates of speed, as the whole is hereinafter fully set forth.

P' P Y represent a wooden frame-work, of convenient form and size to support the cutting-box and its working-devices. Nothing, however, is claimed in this regard, as other forms of frames will answer the purpose equally well.

C, fig. 1, is a shaft, which turns in boxes B B, supported by the upper frame-pieces P', in the usual manner, and which supports an ordinary balance-wheel, A, having arms X, to which knives F are fastened, by bolts *f f*, figs. 1 and 6, in the ordinary manner.

The shaft C also supports a bevelled pinion, R, figs. 1 and 2, which is so arranged as to slide on the shaft, and mesh into gear with either of the bevel-gears *c I*, figs. 1 and 2, cast on the wheel E, two holes, S, each corresponding in size to a hole in the collar T of the pinion R, being made in the shaft C, to receive a pin, which holds the pinion in place.

By means of this arrangement of the sliding pinion R, outer bevel-gear *c*, and inner bevel-gear I, the operator is enabled so to increase or diminish the motion of the feed-cylinders, relative to the strokes of the knives, as to cut two different lengths of straw or feed, as will be clearly seen by the following reference to said cylinders, and how they are driven.

A pinion, J, fig. 2, is attached to the same shaft as the compound bevel-wheel E, and is, consequently, driven by it, and drives the pinions G H, which are fastened to the journals of the feed-cylinders G' H', figs. 2 and 4.

These cylinders have a series of regular projections on their peripheries, formed either by turning angular grooves in them, and then so cutting angular grooves across those first made, and parallel with the axes of the cylinders, that one face of the grooves shall be nearly on the line of a tangent, and the other nearly on the line of a radius; or cast them from a pattern formed as above described.

The object of so forming the projections or teeth is, that they will carry the straw forward to the knives, and yet not catch to it when passing by the toothed plate Z Z', figs. 2 and 3.

The plate Z is fixed to the bed of the cylinder-box L, and lies parallel with the bottom, K *d*, of the cutting-box, as shown at fig. 2, and the plate Z' to the same box, but far enough above it to suit the position of the upper cylinder G', fig. 4.

The teeth 2 of both cylinders fit closely into the notches between the teeth 11, &c., formed on their respective plates Z Z'; and the journals of the cylinders run in boxes so formed in the inner faces of the cutting-box and cylinder-box that the cylinders are readily taken out, when the bolts *h h*, figs. 1 and 3, which fasten the two parts together, are removed.

The box L has a substantial stand, W', cast solid to it underneath, which, together with a similar stand, W, under the box N, is bolted fast to a bed-piece, Y A', figs. 1 and 4, while the wooden part of the feed-box, shown at *d*, fig. 2, has an additional support on one of the frame-pieces P'.

It will be seen, from this description, that a complete cutting-box is provided, although many well-known devices have been employed in its construction. It is claimed, however, that the parts hereinafter enumerated add materially to its working, efficiency, and convenience.

Having thus fully described my invention,

What I claim, and desire to secure by Letters Patent of the United States, is—

1. The combination of the toothed feed-cylinders G' H', toothed plates Z Z', cylinder-box L, and cutter-box K *d* N, constructed as and for the purpose set forth.

2. The combination of the feed-cylinders G' H', toothed plates Z Z', boxes L K *d* N, compound gear-wheel E, sliding pinion R, and shaft C, as described.

G. PEDERSEN.

Witnesses:

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