(No Model.)

J. SCHOEPFLIN.

FEED CUTTER.

No. 350,159. Patented Oct. 5, 1886.

Fig. 1.

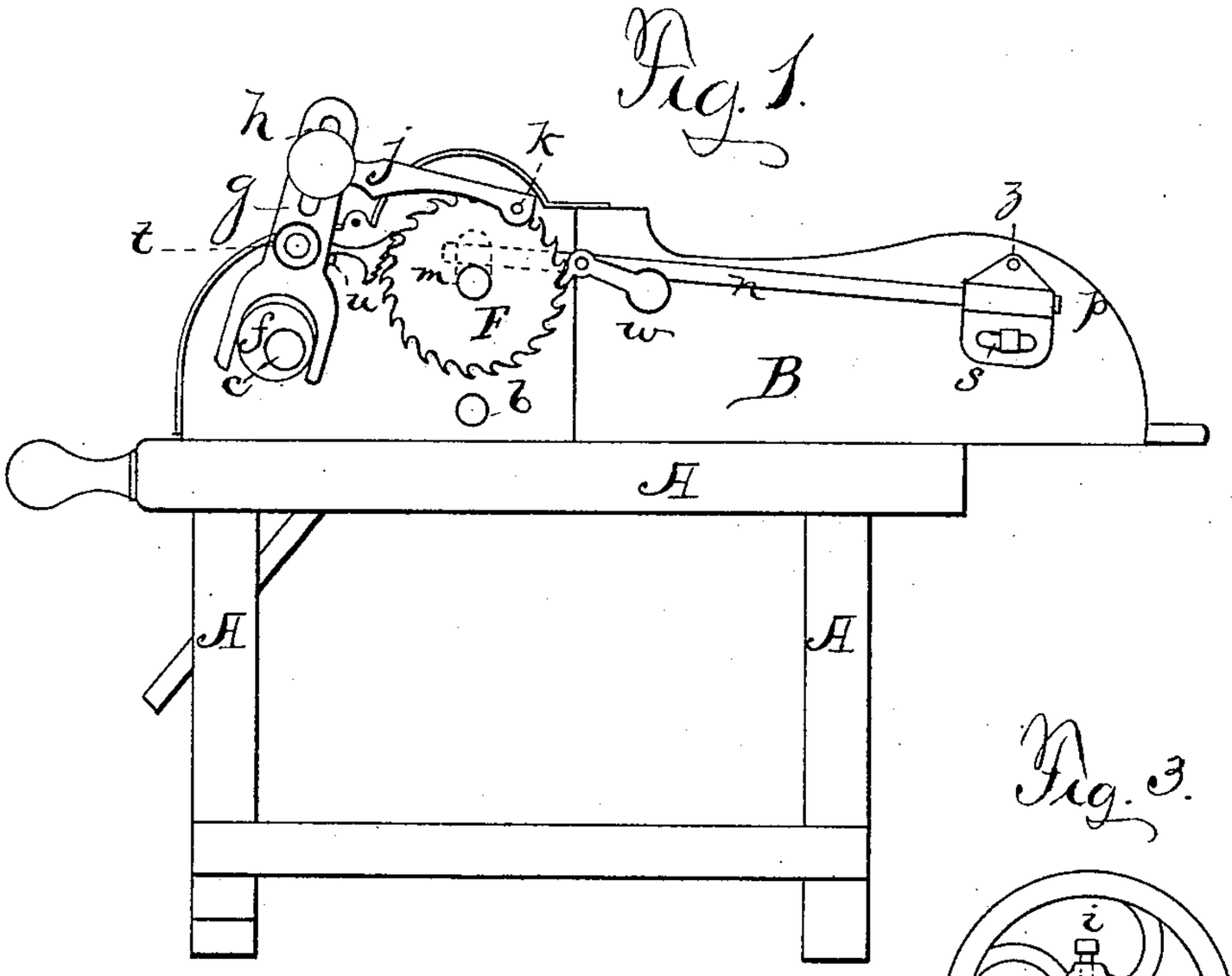

Fig. 3.

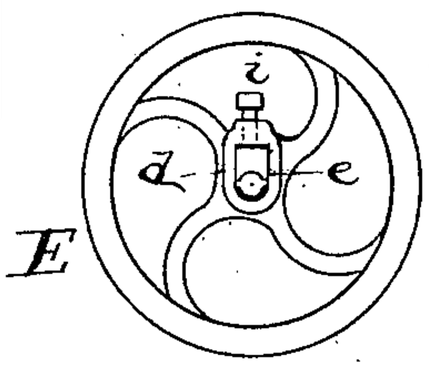

Fig. 2.

Witnesses:
T. F. Sargeant.
J. R. Drake.

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Inventor, by
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UNITED STATES PATENT OFFICE.

JOHN SCHOEPFLIN, OF GARDENVILLE, NEW YORK.

FEED-CUTTER.

SPECIFICATION forming part of Letters Patent No. 350,159, dated October 5, 1886.

Application filed March 23, 1885. Serial No. 159,841. (No model.)

To all whom it may concern:

Be it known that I, JOHN SCHOEPFLIN, a citizen of the United States, residing at Gardenville, in the county of Erie and State of New York, have invented certain new and useful Improvements in Feed-Cutters, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention as constructed and applied will be understood by reference to the following specification and claims.

In the drawings, Figure 1 is a side elevation of a feed-cutter with the fly-wheel removed; Fig. 2, a top plan of the same with the upper feeding-roller removed; Fig. 3, a detail of the fly-wheel removed and reduced in size.

A represents the usual frame, and B the feeding-box.

C is a toothed operating-wheel having cranks *a*. On the shaft *b''* of this wheel is the under feeding-roller, *b*, that operates in connection with the usual toothed feeding-roller above it. (Not shown.) The roller *b* is made with heads *b'* and inclined to the shaft like a spool, the object being to take the pressure off the ends, as is now the case, the tendency of the feed being to work to the sides or ends of the rolls and clog them. The inclined heads prevent this by keeping the straw or hay in the center, where it can be properly acted on by the cutter.

D is a toothed wheel on the cutter-shaft *c*, (cutter not shown,) meshing with operating-wheel C. On the opposite end of this shaft *c* is the fly-wheel E, having its hub constructed with an elongated bearing, *d*, (see Fig. 3,) the lower part round and the upper part square. Into this is set a safety-box, *e*, the lower part rounded to admit the shaft *c*, but allowing a slight vertical play in the hub. Through the top of this hub is a set-screw, *i*, that presses the safety-box onto the shaft, and is set at a sufficient tension to allow hay or straw to pass through the cutter; but if the knife meets any foreign substance—such as a stick, stone, &c.—the fly-wheel, from the resistance of the cutter, will revolve loose on the shaft, and thus prevent damage to the knife. No key is used in this fly-wheel. On the same shaft, close to the side frame, is an eccentric, *f*, which oscillates a forked upright piece, *g*, pivoted to the side frame and having a vertical slot, *h*, therein, in which is pivoted an adjustable loose arm, *j*, holding a roller or pin, *k*. (See Figs. 1 and 2.) This rests in the teeth of a large ratchet-wheel, F, on the end of the feeder-shaft *m*, the seat between each tooth being rounded out to allow this roller *k* to set therein. This allows an adjustment, high or low, of the arm *j*, whereas the ordinary ratchet and ratchet-tooth would break at various adjustments. It also allows for meeting the rise of the ratchet-wheel by the action of the feed-roller, which is set in the usual vertical bearings, but is kept in proper adjustment by the side springs, *n n*, which are of wood, the extreme ends resting on the feed-roller shaft *m*, as shown, and the other end (of each) set in a clamp, *p*, pivoted at *z* to the outside of the feeding-box B, having a curved longitudinal slot, *s*, with a screw-nut passing through the slot into the box. By this simple means the springs are tightened by being pressed down on the shaft *m*, and the screw-nut set tight against the clamp *p*. The adjustment of the arm *j* in the slot *h* is important, as it makes the feed of the roller longer or shorter by graduating it to allow the roller *k* to slip over one, two, or more teeth on the ratchet-wheel, setting the arm for different lengths of feed, as required.

t is a dog pivoted to the shaft of the upright forked piece *g* to follow its movements. The face of this dog is serrated to catch the ratchet-teeth to prevent any backward movement. A stop, *u*, prevents its dropping.

w is a weighted dog used for the same purpose; but when the cutter runs fast it does not always work satisfactorily, and the dog *t* is intended to replace it.

I claim—

1. The combination, in a feed-cutter, with a supporting-frame, of a feed-roll, a ratchet-wheel on one end of the same, a cutter-shaft carrying a cam, a forked upright pivoted to the frame and having its forked end fitting over the cam, said upright being formed with a slot, *h*, an arm, *j*, secured adjustably in said slot, a roller carried by the arm *j* and resting on the ratchet-wheel, and detent devices, as described, for preventing the backward movement of the ratchet-wheel, substantially as set forth.

2. The combination, in a feed-cutter, with a supporting-frame, of a feed-roller having bearing and vertically adjustable in slots of the frame, springs bearing against the upper side

of the shaft of said roller, means, as described, for regulating the tension of said springs, a ratchet-wheel on the roller-shaft, the cutter-shaft, a cam on one end of the latter, a forked standard pivoted to the frame and having an elongated slot, an arm, *j*, vertically adjustable in the slot and carrying a roller, which rests on the ratchet-wheel, a dog, *t*, having a serrated face, and a stop, *u*, for said dog, substantially as set forth.

3. In a feed-cutter, the combination, with a supporting-frame, of an upper feed-roller vertically movable, springs *n*, and means, as described, for regulating the tension of the latter, a ratchet-wheel, F, the cutter-shaft, a cam, *f*, a pivoted forked standard, *g*, having a vertical slot, *h*, arm *j*, carrying roller *k*, removable fly-wheel, detent devices, as described, and an under feed-roll having tapering heads, as set forth.

In testimony whereof I affix my signature in presence of two witnesses.

JOHN SCHOEPFLIN.

Witnesses:
J. R. DRAKE,
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