(No Model.)

C. F. TAYLOR.

MACHINE FOR TREATING RAGS, &c., FOR PAPER STOCK.

No. 355,898. Patented Jan. 11, 1887.

Fig. 1

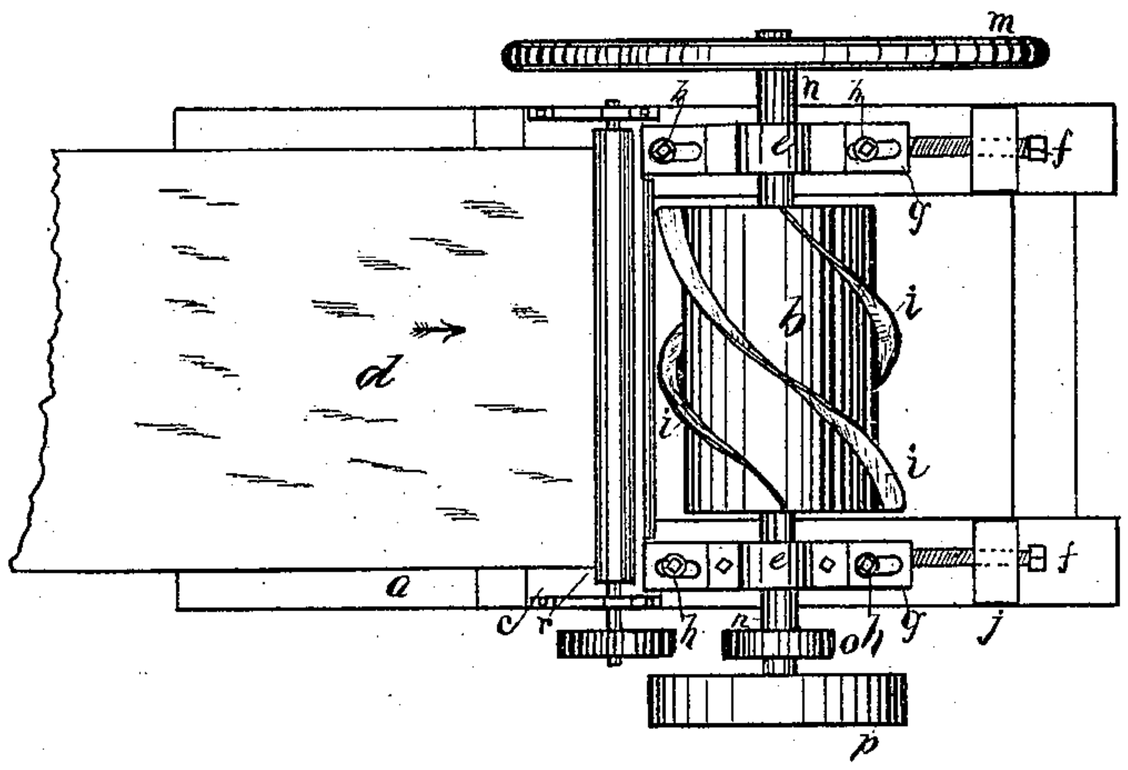
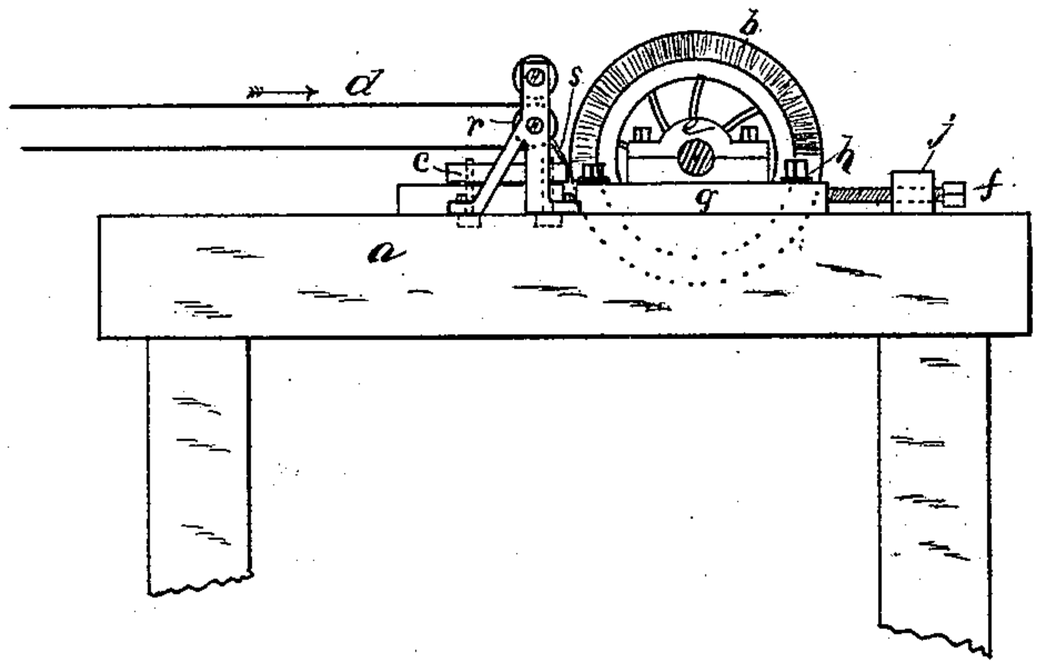


Fig. 2



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MACHINE FOR TREATING RAGS, &c., FOR PAPER-STOCK.

SPECIFICATION forming part of Letters Patent No. 355,898, dated January 11, 1887.

Application filed August 28, 1885. Serial No. 175,549. (No model.)

To all whom it may concern:

Be it known that I, CHARLES F. TAYLOR, a citizen of the United States, residing in Holyoke, in the county of Hampden and State of Massachusetts, have invented new and useful Improvements in Rag-Cutting Machines, of which the following is a specification, reference being had to the accompanying drawings.

My invention relates to the construction of rag-cutting machines in which a revolving blade or cutter is adapted to cut against a fixed knife; and it consists in the construction and arrangement whereby the two knives are adjusted relative to each other.

Heretofore the fixed knife has been adapted to be moved to and from the revolving knife. This under some circumstances and in some machines is objectionable, as the fixed blade cannot be held as rigidly when adapted to be moved for adjustment as it can when held and fixed firmly in one place, and the arrangement of the fixed knife above the center of the revolving knife, as heretofore done, is objectionable in some instances, as a more complicated and accurate feed device is required in such construction to present the material to be operated upon to the cutting-point.

The object of my invention is to do away with these objectionable features, and I accomplish this by the construction herein set out.

In the accompanying drawings, in which like letters of reference indicate like parts, Figure 1 is a plan or top view, and Fig. 2 a side view, illustrating a portion of a machine embodying my invention, in which the main parts are lettered as follows:

a indicates the frame; *b*, the rotary cutter; *d*, a feed-apron; *e*, bearing-boxes for the rotary cutter, and *f* adjusting-screws.

The fixed knife is secured to the frame in any convenient manner, and the bearings of the rotary cutter are adapted to be moved through the medium of the adjusting-screws *f*, so the revolving cutter may be moved toward the fixed blade.

The boxes or bearings *e* are secured to a part, *g*, which is provided with slots, through which bolts *h* pass and secure the same firmly to the frame. The set-screw *f* passes through a box, *j*, and bears against the sliding block *g*, which block, after being adjusted in the desired position, is firmly secured to the frame by the screws *h*.

The fixed knife is made of a plate of steel having square edges, and is bolted to the frame, as shown.

The rotary cutter *b* is provided with spiral blades *i*, which are cast with and made integral with the body *b*. The rotary cutter is fixed to the shaft *n*, to which are fixed the balance-wheel *m* and the driving-pulley *p* and feed-pulley *o*. An endless feed-apron, *d*, passes over a roll, *r*, and conveys the material to be cut to a position above or near the cutting-point, where the material falls either directly to the cutting-point, or, falling upon an incline, *s*, is directed to the desired point where the rags are seized by the blades and separated.

One great advantage in placing the fixed knife in a position in line with or a short distance below the center of the revolving cutter is seen in the fact that a greater clearance below the cutting-edge is thus obtained, and a square-edged fixed knife may be used, which may be reversed when one edge becomes worn, so that instead of an expensive especially-prepared fixed knife a simple square-edged plate of steel may be used, each of the four edges of which may be used as a cutting-edge.

Any convenient method of feed may of course be used.

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

1. The combination of a spiral-bladed rotary cutter with a square-edged fixed knife, substantially as shown.

2. The combination of a square-edged fixed knife, a rotary cutting-blade, and a means to feed the rags to the cutting-point, substantially as described.

3. A fixed knife, in combination with a rotary cutter having movable bearings, whereby the rotary cutter may be moved to and from the fixed knife, substantially as shown.

4. The combination of a spiral cutter having movable boxes *e*, set-screws *f*, a fixed knife, and a means to feed the stock to the cutting-point, substantially as shown.

5. The combination of a supporting-frame,

a rotary cutter, a fixed knife, *c*, movable boxes *e*, set-screws *f*, and feed-apron *d*, all constructed and operating substantially as shown.

6. The combination of rotary cutter *b*, fixed knife *c*, feed-apron *d*, and chute or guide-piece *s*, operating substantially as shown.

7. A square-edged fixed knife arranged below the center of the rotating cutter, in combination with a rotary cutter mounted on adjustable bearings and formed of a cylinder having spirally-arranged blades projected from its circumferential face, substantially as described.

8. The combination of the square-edged fixed knife and the inclined guide-plate *s* with the rotary cutter mounted on adjustable bearings, and formed with spirally-arranged blades on its circumferential face, substantially as described.

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