

R. HENEAGE.

Combined Hemp Brake and Dresser.

Patented Jan'y 22, 1861.

No. 31,167.

Fig. 1.

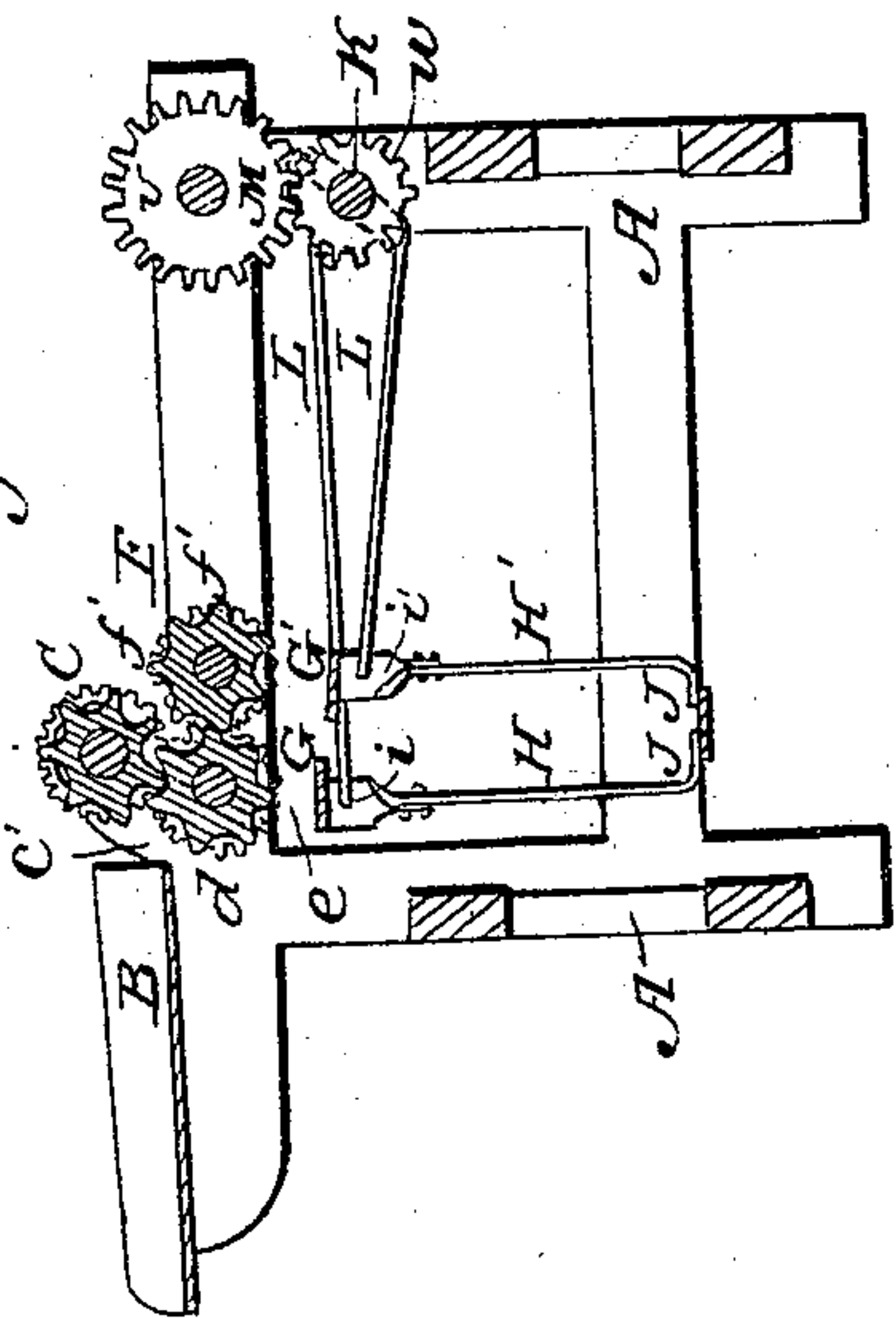


Fig. 3.

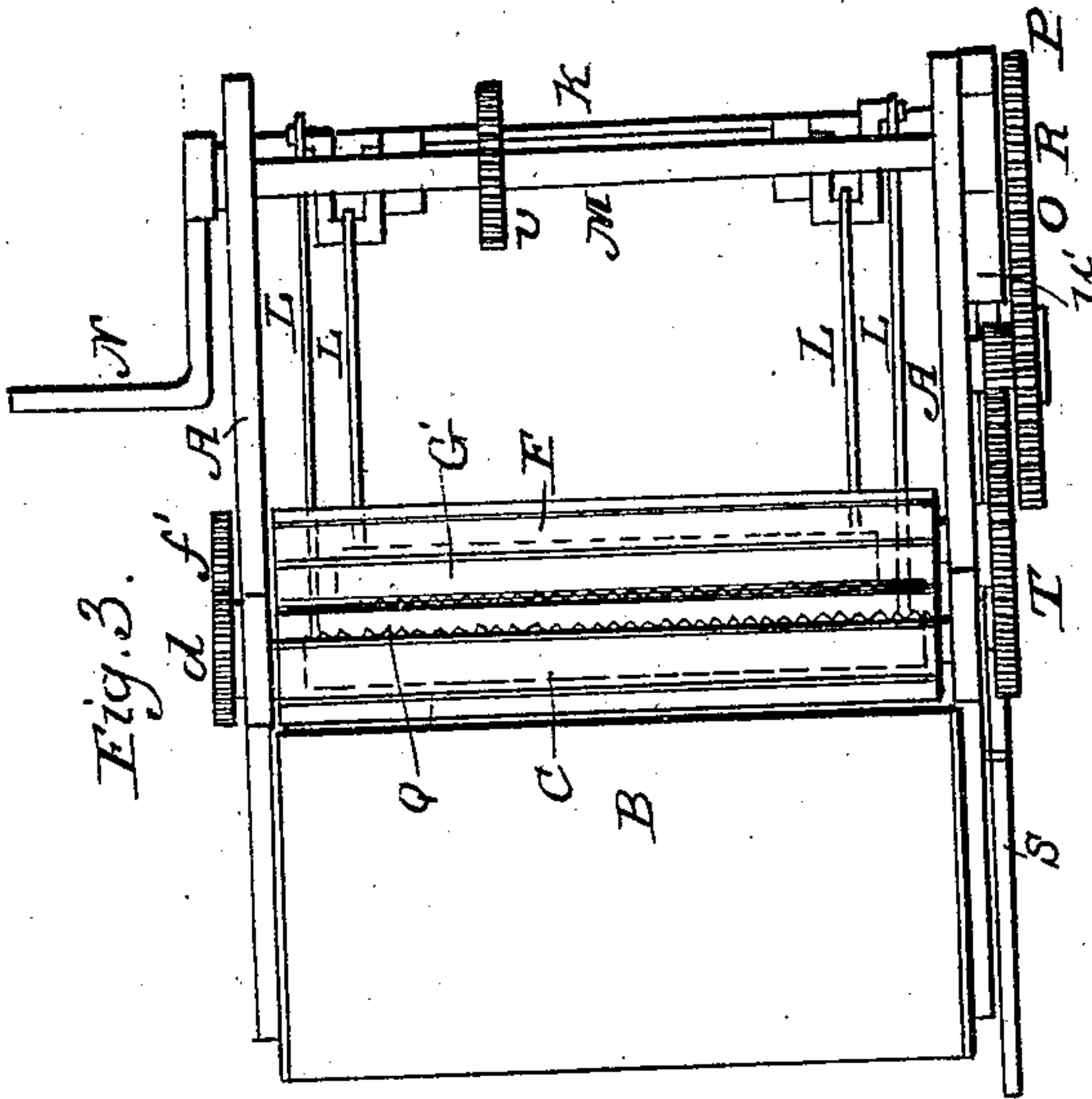
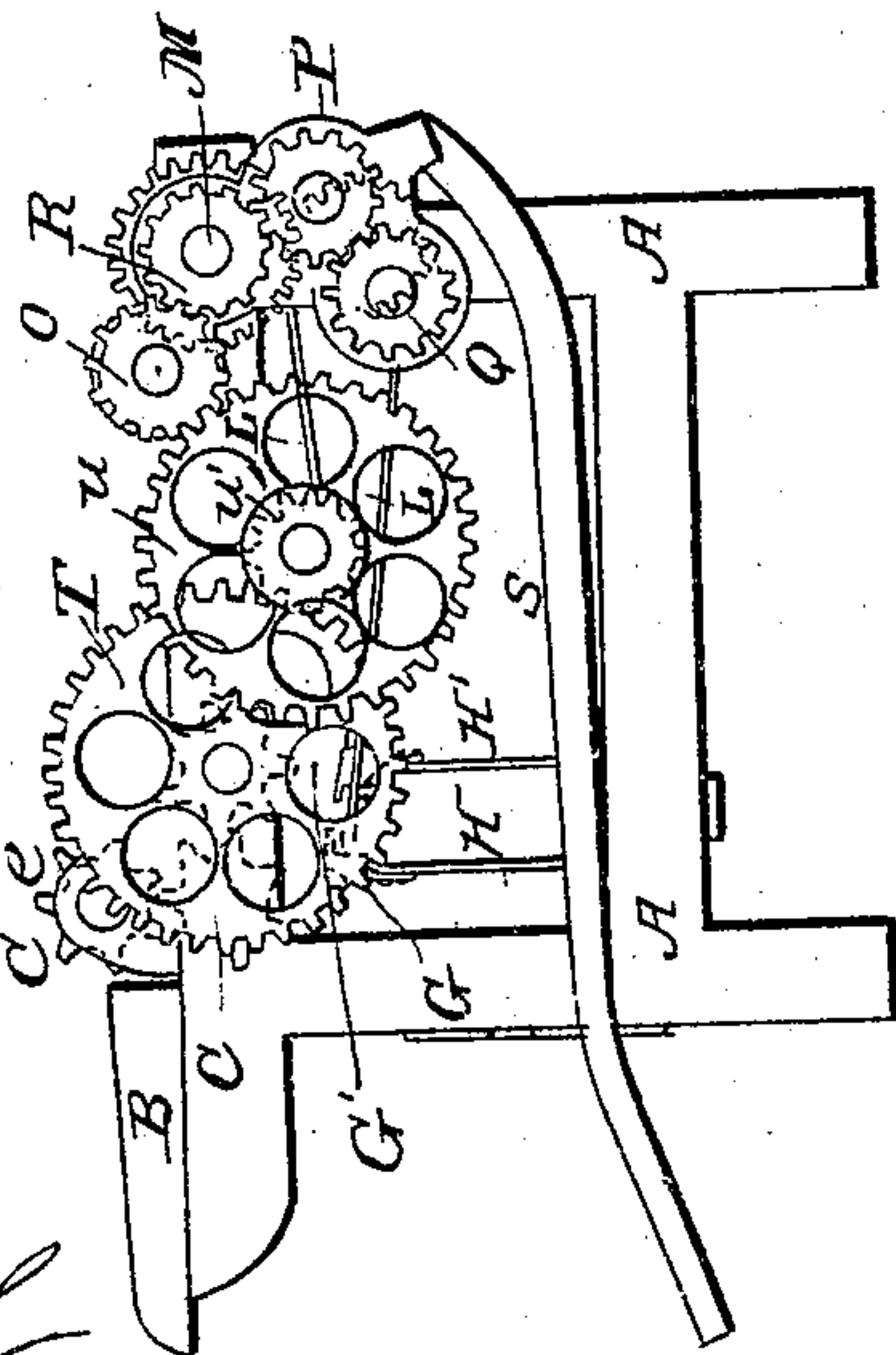


Fig. 2.



Witnesses:

Walter H. Forbush
Eusebius M. Davis.

Inventor:

Robt. Heneage

UNITED STATES PATENT OFFICE.

ROBERT HENEAGE, OF BUFFALO, NEW YORK.

IMPROVEMENT IN HEMP-BRAKES.

Specification forming part of Letters Patent No. 31,167, dated January 2^d, 1861.

To all whom it may concern:

Be it known that I, ROBERT HENEAGE, of the city of Buffalo and State of New York, have invented certain new and useful Improvements in Combined Hemp Brakes and Dressers; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, in which—

Figure I is a longitudinal section. Fig. II is a side elevation. Fig. III is a top plan.

Letters of like name and kind refer to like parts in each of the figures.

A represents the main frame of the machine; B, table upon which the hemp is laid, in order to be fed to the brakes.

c and *c'* are the brakes. These are fluted rollers having spur-wheels *d d'* upon the ends of their shafts, which spur-wheels mesh together and control the motion of the brakes. The ribs *e* of each brake or roller (as the brakes revolve) pass into the spaces between the ribs of the other, so that the ribs do not come in contact, yet they revolve in such close proximity as to break the woody parts of the hemp.

F represents a secondary brake. This is also a fluted roller similar to the brakes *c c'*. It has a spur-wheel, *f'*, on the end of its shaft, which meshes in with the spur-wheel on the lower brake or roller. The object of this is to complete the process of breaking, and also to direct the hemp downward to and between the combs.

G and G' represent two combs or dressers, which are supported upon the vertical springs H H'. The combs are made of thin plates of steel, and have scalloped edges, (or for flax they may be toothed.) They are so placed upon the springs that G will stand close to the lower forward roller, C', the other one inch and a half (more or less) below the forward comb, G. The springs which support one of the combs stand directly under the roller F, while the springs supporting the other comb stand directly under the brakes, as represented in the drawings. A small piece of bent iron, *i*, is riveted to the springs and also to the combs, and forms the connection between the two, as represented. The springs are securely fastened to the frame, as shown at J.

K represents a crank-shaft, and L connecting-rods, which communicate a reciprocating motion to the combs.

The crank-shaft K and connecting-rods L are made and operated in a common manner and perform the ordinary functions of such devices, and are in this case employed for the purpose of giving a reciprocating motion to the combs G and G'. The combs are made six inches wide, more or less, and the throw of the crank and the position of the springs so proportioned therewith that the throw of the cranks will not carry the scalloped edge of the one comb past the back of the other. The springs will allow the combs to vibrate a distance equal to the diameter of the circle described by the crank, or, in other words, a distance equal to the "throw" of the crank. The position of the springs with the combs thereon and the connection of the combs by means of the connecting-rods to the crank-shaft are such that when the combs move toward each other the teeth or scalloped edge of the one comb cannot pass beyond the back or outer line of the other. Another important purpose of the spring is to react upon the crank and momentum of the combs and receive the blow or dead-weight thereof at the extremes of motion.

M represents the driving-shaft, and N a hand-crank thereon. Instead of the crank, a pulley is to be used on the end of the shaft, and power applied in a common manner.

O P Q are spur-wheels placed upon the shifting-lever S. The shifter S has its fulcrum or central movement upon the crank-shaft M.

The construction and operation of the shifter S, including the shifting-gear O P Q, are of an ordinary and well-known character, and are combined and used for the purpose of reversing the motion of the brakes at pleasure.

R is a spur-wheel on the end of the driving-shaft.

T is a large spur-wheel on the end of the roller-shaft, and *u* is a spur-wheel which connects with the shifting-gear. On the shaft of U is a small spur-wheel, *u'*, which meshes in with spur-wheel T.

v is a spur-wheel on the driving-shaft M, which gears with the pinion *w* on the crank-shaft K.

Operation: A proper quantity of hemp is spread upon the table B and fed into the rollers or brakes *c c'*, which crush or break the woody parts. The roller or secondary brake F directs it downward to and between the combs, and completes the breaking of the woody parts of the hemp. The combs (in their rapid reciprocating movements) strike into the fiber and "scutch" or comb out the woody parts, leaving the fibrous parts unseparated and clear of the "shive" or woody parts. The stroke of the dressers is made short, so as not to comb out the tow. The parcel of hemp is allowed to pass in about three-quarters of its length, at which time the gear is shifted by raising or lowering the shifting-lever S, by which the motion of the brakes is reversed and the hemp thereby carried back upon the table. The operator then reverses the gear and changes the hemp end for end, and again feeds it in until its whole length has been carried to the brakes and dressers—that is to say, it is allowed to pass in until the breakers and dressers meet that portion of the hem which was

previously acted upon by the brakes and dressers, so that in both operations the brakes and dressers will have acted upon the entire parcel of hemp. The gear is then reversed again, and the parcel of hemp run back upon the table fully dressed and ready for the mill.

This machine is applicable for breaking and dressing hemp, flax, and other fibrous plants.

What I claim as my invention, and desire to secure by Letters Patent, is—

The arrangement of the secondary brake F with the brakes *c c'*, in combination with the dressers G G' and the gearing for reversing the motion of the machine, so that the parcel of hemp as it passes through the brakes will be bent at right angles, or nearly so, and directed downward to the dressers, the brakes operating and holding onto the parcel of hemp while the dressers are performing their work, substantially as set forth.

ROBT. HENEAGE.

Witnesses:

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