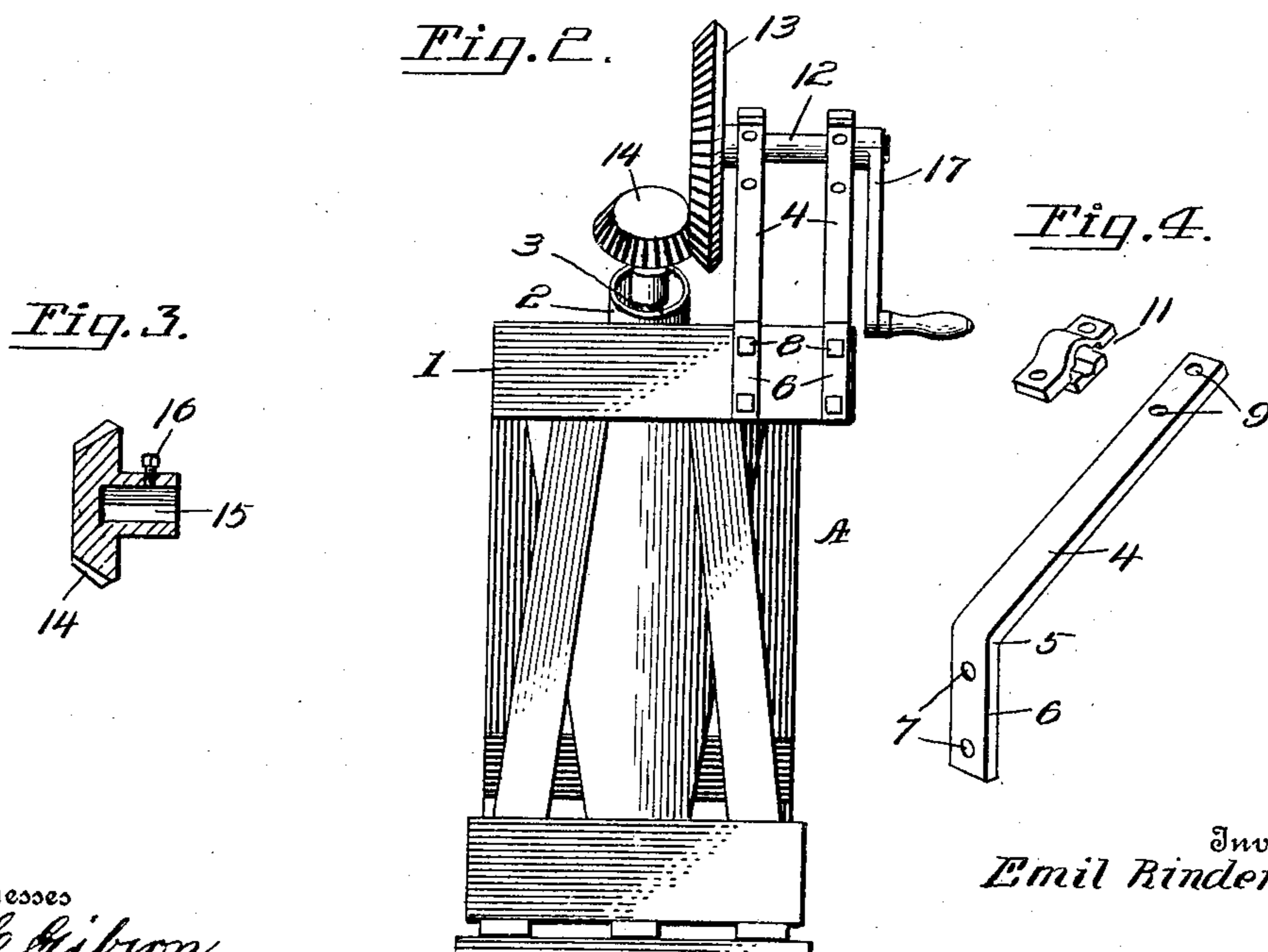
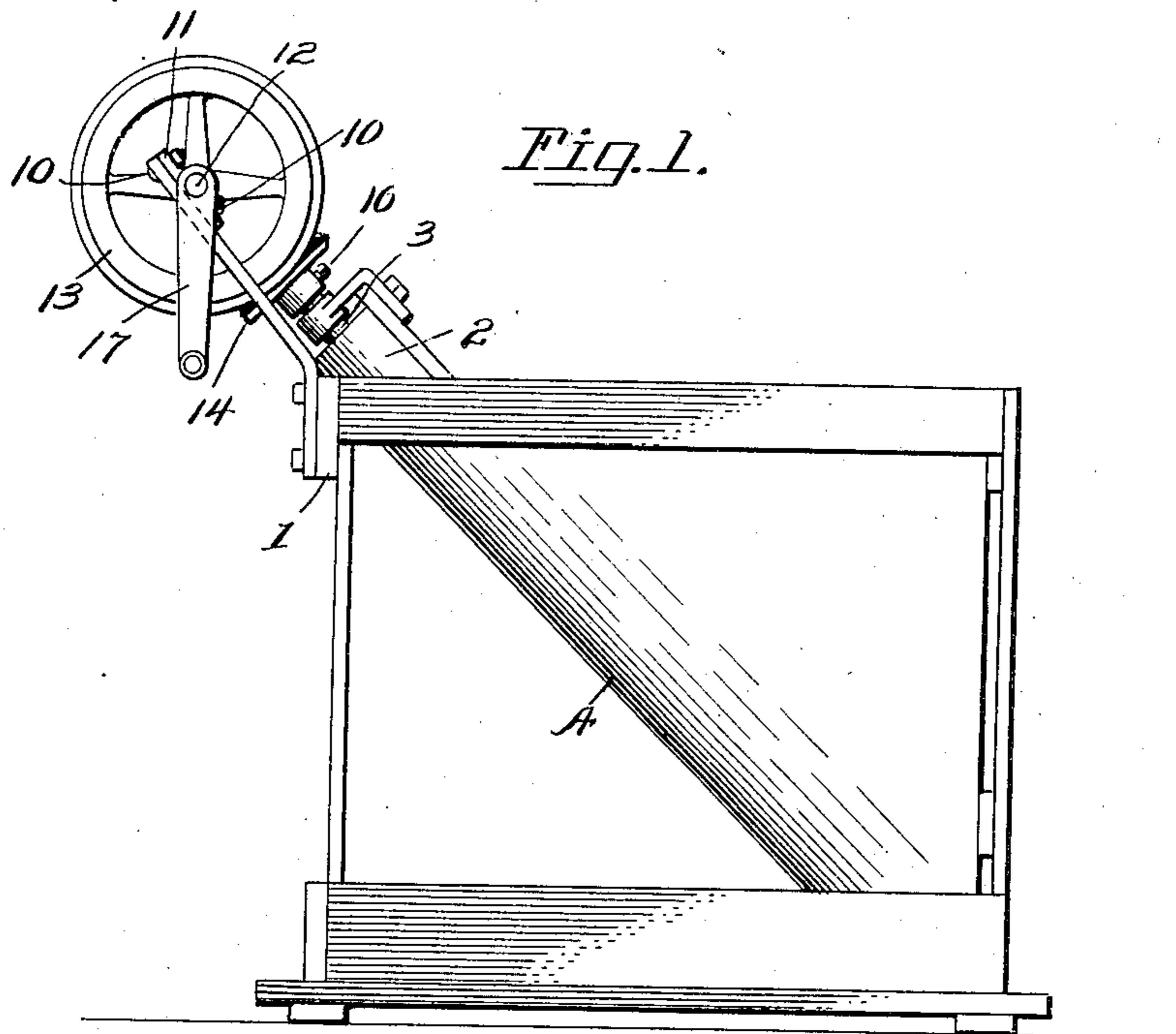


No. 897,785.

PATENTED SEPT. 1, 1908.

E. RINDERMAN.
ATTACHMENT FOR SMUT MACHINES.
APPLICATION FILED JULY 9, 1907.



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ATTACHMENT FOR SMUT-MACHINES.

No. 897,785.

Specification of Letters Patent.

Patented Sept. 1, 1908.

Application filed July 9, 1907. Serial No. 382,819.

To all whom it may concern:

Be it known that I, EMIL RINDERMAN, a citizen of the United States, residing at Page, in the county of Cass and State of North Dakota, have invented new and useful Improvements in Attachments for Smut-Machines, of which the following is a specification.

This invention relates to attachments for smut machines; and it has particular reference to an improved attachment adapted to be used in connection with the smut machine patented to Andrew V. Cleland, on December 6, 1904, No. 776,889.

The smut machine to which reference has just been made includes a hollow shaft arranged for rotation in a casing, and driven by means of a crank mounted upon one end of said shaft. The shaft is mounted in an inclined position, the crank being secured at the upper end thereof, and said crank occupies a position which renders it difficult to rotate the shaft at the requisite speed. The object of the present invention is to provide an attachment which may be readily applied to the smut machine in question, the same including a pair of brackets, a shaft supported for rotation in boxes upon the said brackets and carrying at one end a bevel gear of suitable dimensions, and a bevel pinion adapted to be mounted upon the hollow shaft in place of the crank; the latter being transferred to the shaft carrying the bevel gear for the purpose of rotating the latter. The crank will thus be mounted in a position where it is conveniently accessible for use; and the hollow shaft may be conveniently rotated at a speed which may be regulated by properly proportioning the bevel gear and the pinion.

The invention consists in the improved construction and novel arrangement and combination of parts which will be hereinafter fully described and particularly pointed out in the claims.

In the drawing, Figure 1 is a side elevation conventionally showing a Cleland smut machine having the improved attachment applied thereto. Fig. 2 is an end view of the same. Fig. 3 is a sectional detail view of the bevel pinion. Fig. 4 is a perspective detail view showing one of the brackets and

the boxing used in connection therewith, the boxing having been detached from the bracket.

Corresponding parts in the several figures are denoted by like characters of reference.

In Figs. 1 and 2 of the drawings, there is conventionally shown a Cleland smut machine, generally designated A, the same being constructed with a frame work including a cross-bar 1 which supports the upper rear end of the pipe 2 through which extends the hollow shaft 3, which latter is usually driven by means of a crank connected directly therewith.

The improved attachment comprises two brackets 4—4 consisting of straps of iron, bent at 5 to form downward extensions 6 which are provided with apertures 7 for the passage of bolts or connecting members 8 whereby they may be secured upon the cross-bar 1, from which the bodies of said brackets will extend upwardly and rearwardly, as clearly shown in Fig. 1. The brackets 4 are provided near their upper extremities with apertures 9 for the passage of bolts or connecting members 10 whereby suitably constructed boxes 11 are secured in position upon said brackets; said boxes affording bearings for a shaft 12 carrying at one end a bevel gear 13 of suitable dimensions. The pitch and the dimensions of the brackets 4 will be so calculated that the shaft 12 will be disposed in the same plane as the shaft 3, and at right angles to the latter, so that motion will be transmitted from the said shaft 12 to the shaft 3 by means of the bevel gear 13 and a bevel pinion 14 which latter is provided with a socket 15 whereby it may be fitted upon the shaft 3, it being secured upon the latter by means of a set screw 16. The crank 17 which is mounted upon the shaft 12, and whereby said shaft is rotated, may be the crank which was originally applied to the shaft 3; said crank being transferred from the shaft 3 to the shaft 12, as will be readily understood.

The operation and advantages of this invention will be readily understood. The improved attachment may be manufactured, and supplied at a moderate expense to parties owning the Cleland machine, and said attachment may be readily applied to the said

Cleland machine, which latter may be thereby operated in a more efficient and satisfactory manner than by the means usually provided for the purpose.

5 It will be understood, of course, that the essential feature of my invention resides in the novel construction and arrangement of the brackets 4—4 whereby the drive gearing is mounted in an effective manner. By the
10 use of a pair of bracket straps disposed in spaced relation, the brackets may be easily and inexpensively manufactured of strap iron, and the angular form of said brackets not only provides for the support of the drive
15 shaft in proper position, but adds strength, thus obviating the necessity of employing an expensive cast bracket. Moreover, the spaced arrangement of these bracket straps allows the bearings to be arranged to support
20 the shaft adjacent its respective ends, thus bracing and adapting the shaft to more effectually withstand the torsioned strains thrown therein in operation from the rotation of the crank and the resistance of the gear-
25 ing, particularly in starting the machine into operation from a state of rest. The upward and rearward oblique extension of the brackets beyond the end of the frame also adapts the bearings to have a slight yielding action
30 or spring action under the strain of starting up to absorb a portion of such strain and

prevent possible injury at such time to the parts of the gearing.

Having thus fully described the invention, what is claimed as new is:—

In a feed driving mechanism for smut mills, the combination of a frame, an inclined conveyer pipe, a screw shaft mounted for rotation in said conveyer pipe and projecting at its upper end above and beyond the upper
40 rear wall of the frame, a beveled pinion detachably mounted upon the projecting end of the shaft, a pair of resilient angular strap brackets spaced apart and secured at their
45 lower ends to the upper end of the rear wall of the frame and bent to extend at an oblique upward and rearward inclination therefrom, boxes secured to the front faces of the
50 upper ends of the brackets, a shaft extending transversely between and beyond the brackets and journaled in said boxes to support the shaft between its ends, a crank handle
upon the outer end of the shaft and a beveled gear upon the inner end of the shaft
55 meshing with said pinion, substantially as specified.

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

EMIL RINDERMAN.

Witnesses:

W. J. COURTNEY,
L. B. SMITH.