

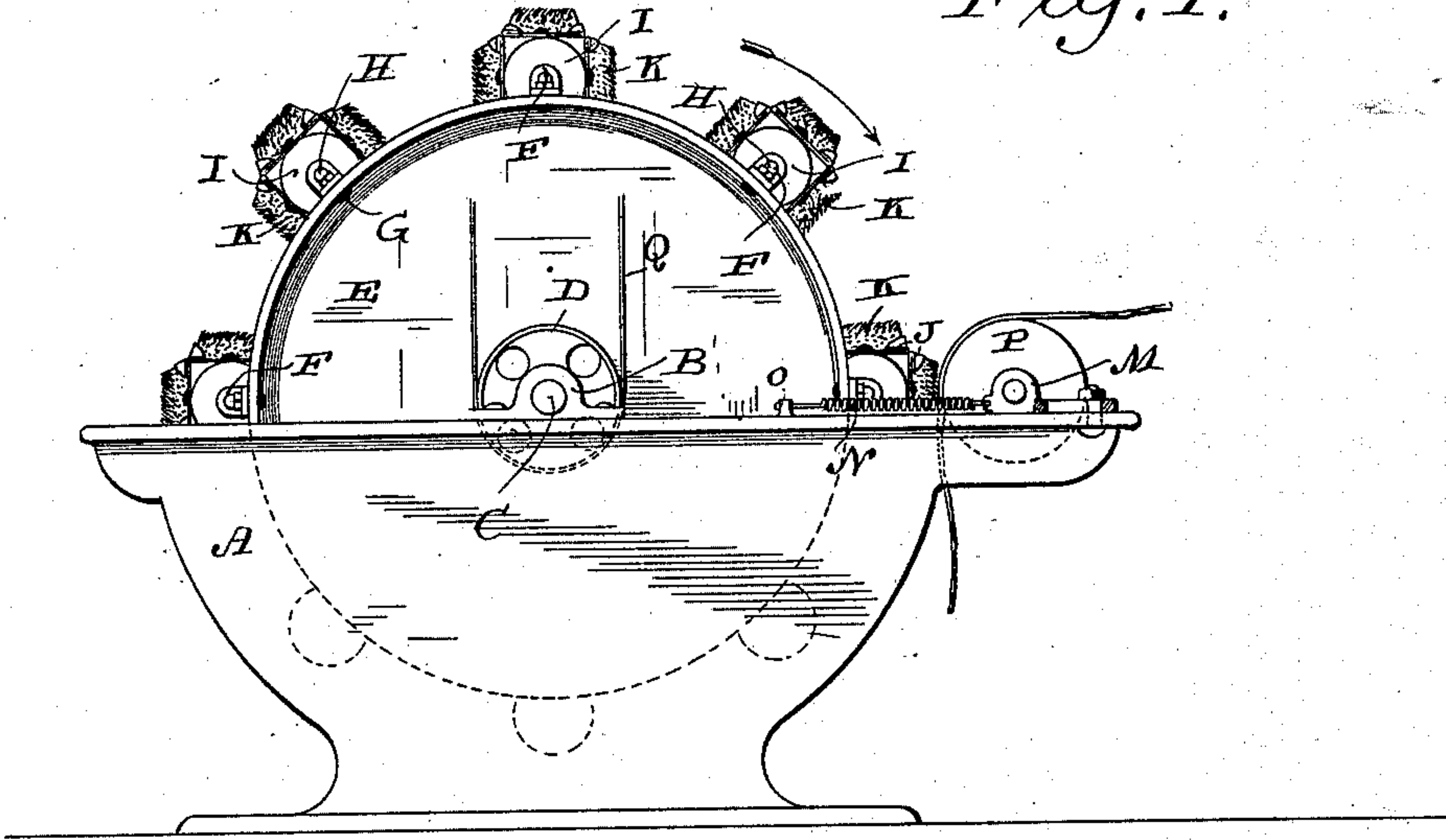
(No Model.)

F. JOPP.  
TEASELING MACHINE.

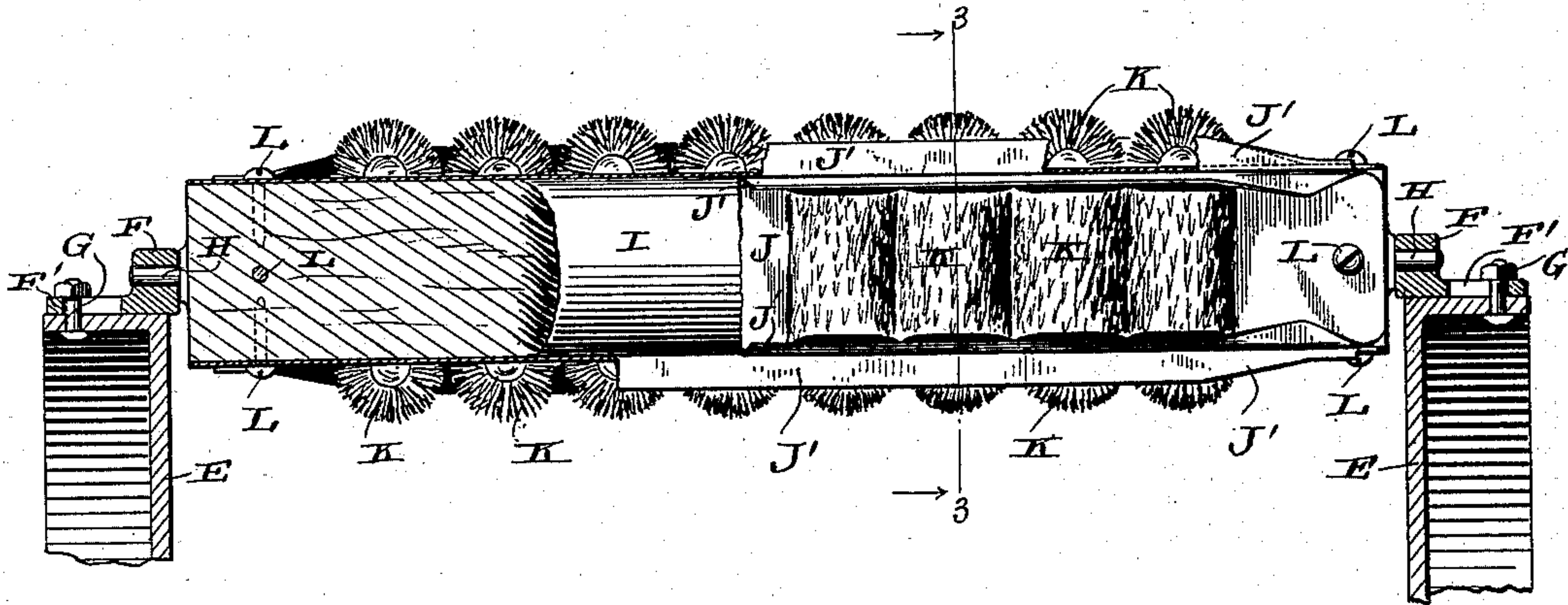
No. 409,975.

Patented Aug. 27, 1889.

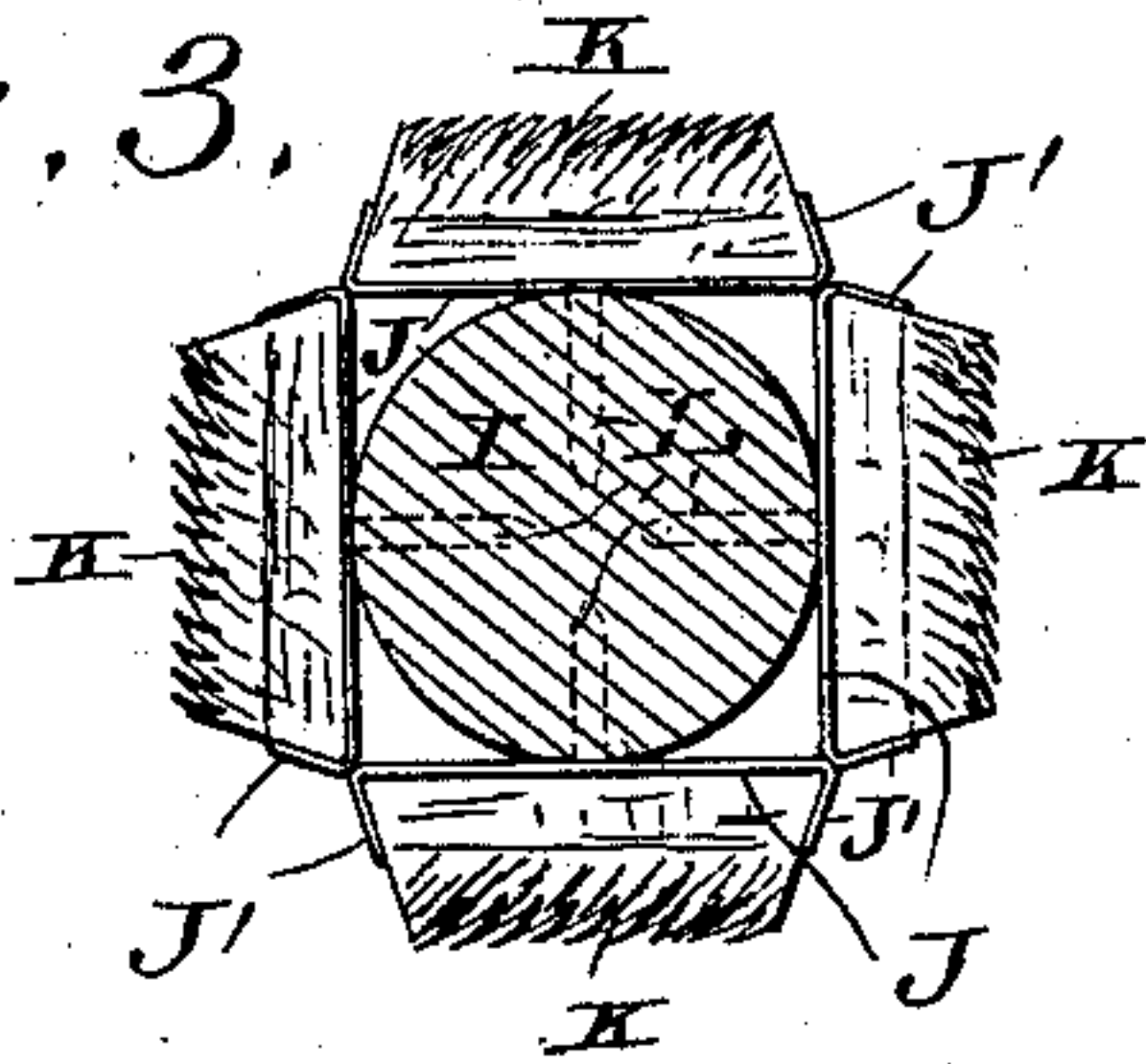
*Fig. 1.*



*Fig. 2.*



*Fig. 3.*



Witnesses  
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# UNITED STATES PATENT OFFICE.

FRANZ JOPP, OF MILWAUKEE, WISCONSIN.

## TEASELING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 409,975, dated August 27, 1889.

Application filed September 3, 1888. Serial No. 284,387. (No model.)

*To all whom it may concern:*

Be it known that I, FRANZ JOPP, of Milwaukee, in the county of Milwaukee and in the State of Wisconsin, have invented certain  
5 new and useful Improvements in Teaseling-Machines; and I do hereby declare that the following is a full, clear, and exact description thereof.

My invention relates to machines for teaseling knit and woven fabrics; and it consists in certain peculiarities of construction and combination of parts, to be hereinafter described with reference to the accompanying drawings, and subsequently claimed.

15 In the drawings, Figure 1 represents a side elevation of a teaseling-machine constructed according to my invention; Fig. 2, a detail of a front elevation of the same with parts broken away; and Fig. 3, a vertical transverse  
20 section taken on line 3 3, Fig. 2.

Referring by letter to the drawings, A represents the frame of my machine, said frame being of any suitable construction. Bolted or otherwise secured to the frame are bearings B for a shaft C, that has keyed or otherwise rigidly secured thereto a driving-pulley D and disks E, the latter being arranged at a  
25 suitable distance apart.

Arranged at intervals on the rims of the  
30 disks E are a series of bearings F, preferably provided with slotted extensions F' and adjustably secured in place by means of set-screws or bolts G, that pass through said disk-rims and slotted extensions of the bearings.  
35 The bearings F are for the journals H of a series of peculiarly-constructed teaseling-rolls, each of the latter consisting of a center-piece I, sheet-metal plates J, having their longitudinal edges bent up to form flanges J', and  
40 a series of teasel-burrs K, held on each plate by the bending down of the flanges, said plates being secured in place by screws L, or other suitable means. The teasel-burrs are preferably split in two, and the sections thus  
45 formed arranged on the plates J, so that all the awns point in the same direction, this direction being at right angles to the axis of the several teaseling-rolls.

Bearings M are loosely secured to the frame  
50 A by bolts and slots, as shown, in the rear of the drum formed by the disks E and the

teaseling-rolls, and these bearings are connected by spiral springs N with lugs O on said frame. Journaled in the bearings M is a roller P, normally held close to the teaseling-drum by the contraction of the springs N, above described. 55

In the operation of my machine the teaseling-drum is driven by a belt Q, that runs around the pulley D, while the fabric to be  
60 teaseled is inserted between the roller P and said drum and held by an operative against the action of said machine. The teaseling-drum being driven in the direction of the arrow Fig. 1, the awns of the teasel-burrs will strike  
65 full against the fabric to raise the nap thereon, and as the teaseling-rolls are free to rotate in their bearings F they will yield to the resistance of said fabric to prevent tearing of the latter or breaking of the awns on the  
70 teasel-burrs. The roller P serves to keep the fabric up to the teaseling-drum, but is free to yield to any inequalities in said fabric or unusual strain brought thereon by the teaseling-rolls. 75

In case a teasel-burr becomes worn out or broken, the flanges J' that hold it in place are bent up and said burr removed, the other burrs are pushed up, and a new burr inserted at an end of the roll. 80

To remove a teasel-roll from the machine, one of its bearings F is loosened and slid back on the disk to clear the adjacent journal, thus leaving said roll free to be lifted out by the operator. 85

By having the teaseling-rolls constructed as above described, I find that I obtain a better result, because all the awns of the teasel-burrs being pointed in the same direction each and every one of them acts upon the  
90 fabric, and being at right angles to the axes of said rolls they take a better hold and exert a more direct pull on said fabric than can be accomplished by teasel-burrs strung on rods, as is ordinarily the case, especially in  
95 machines for teaseling knit-fabrics.

I also find that by my machine I economize in the use of teasel-burrs, because the latter in the arrangement above described are less liable to break, and at the same time they stand  
100 the wear for an indefinite period.

Having thus fully described my invention,



what I claim as new, and desire to secure by Letters Patent, is—

1. A teaseling-roll consisting of a center-piece, sheet-metal plates secured thereto, and  
5 a series of teasel-burrs arranged on the plates at right angles to the axis of the roll and secured in place by the bending over of the longitudinal edges of said plates, substantially as set forth.

10 2. In a teaseling-machine, the combination of a frame, the shaft C, having its bearings on the frame, the disks E, arranged on the shaft and provided with the bearings F, rolls journaled in the latter bearings, teaseling-burrs ar-

ranged on the rolls at right angles to their axes, 15  
spring-controlled sliding bearings arranged on said frame adjacent to the drum formed by said disks and teaseling-rolls, and a pressure-roll journaled in said sliding bearings, substantially as set forth. 20

In testimony that I claim the foregoing I have hereunto set my hand, at Milwaukee, in the county of Milwaukee and State of Wisconsin, in the presence of two witnesses.

FRANZ JOPP.

Witnesses;

N. E. OLIPHANT,

H. G. UNDERWOOD.