(No Model.) 2 Sheets—Sheet 1

W. B. ARNOLD.

MACHINE FOR RASPING PEGS.

No. 245,269. Patented Aug. 9, 1881.

Fig. 1.

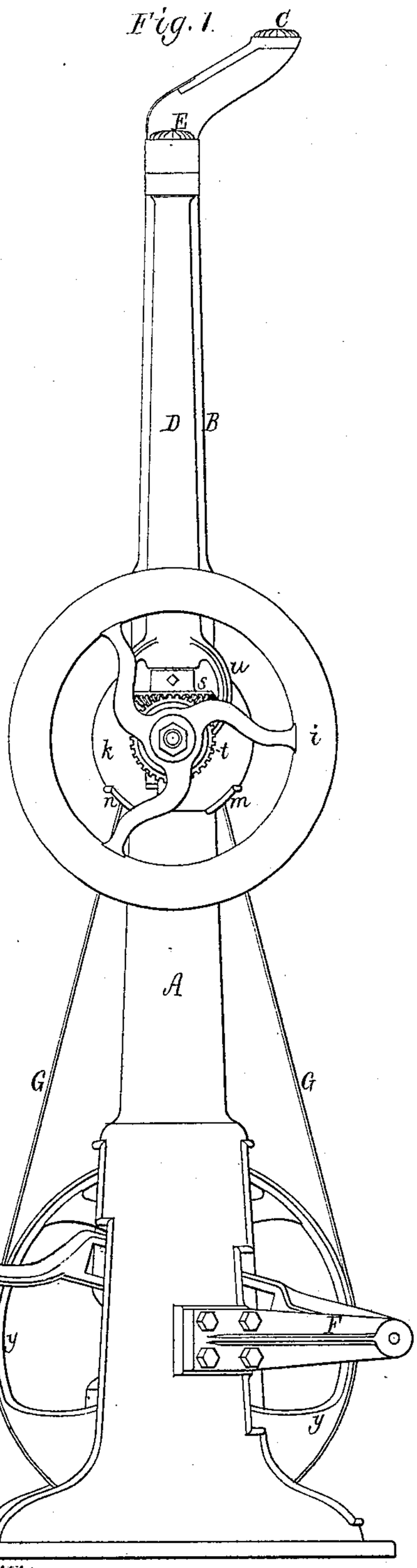
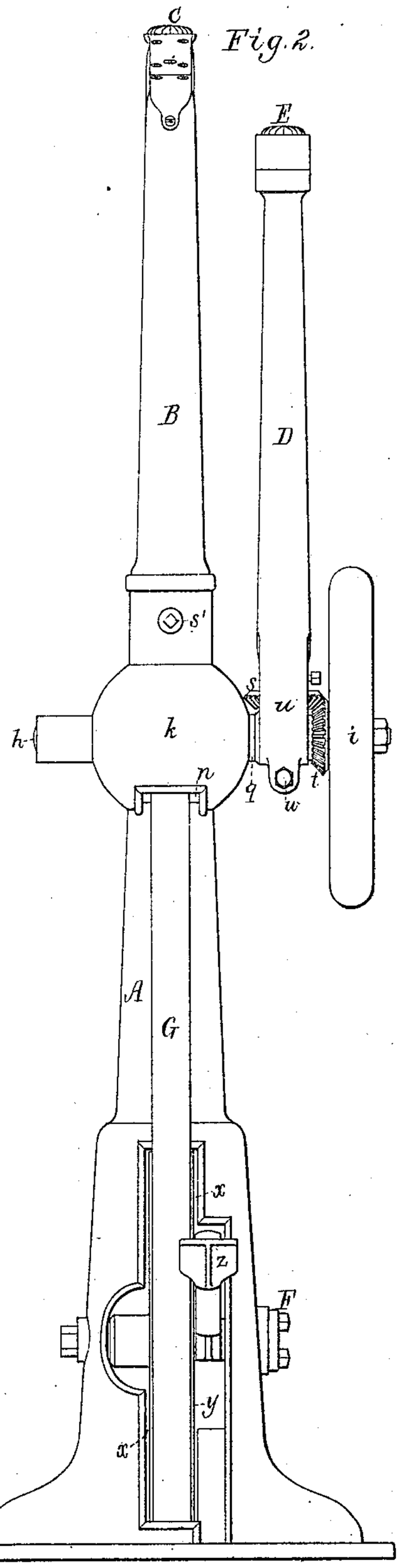


Fig. 2.



Witnesses.

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(No Model.) 2 Sheets—Sheet 2.

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Fig. 3

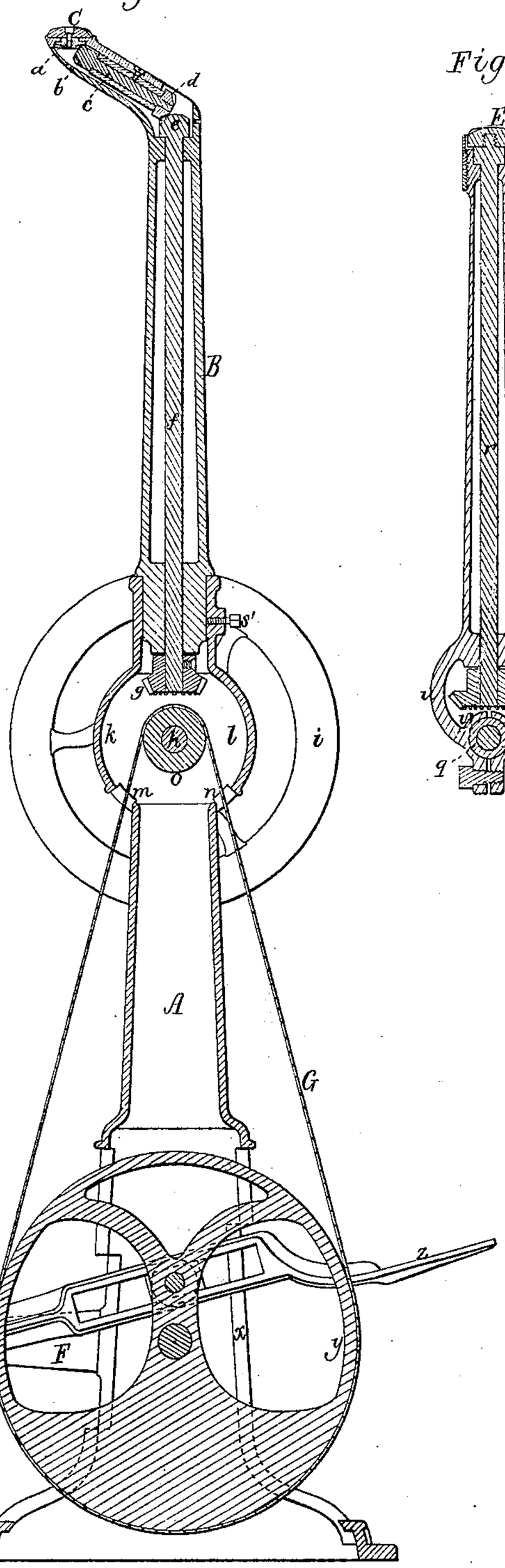
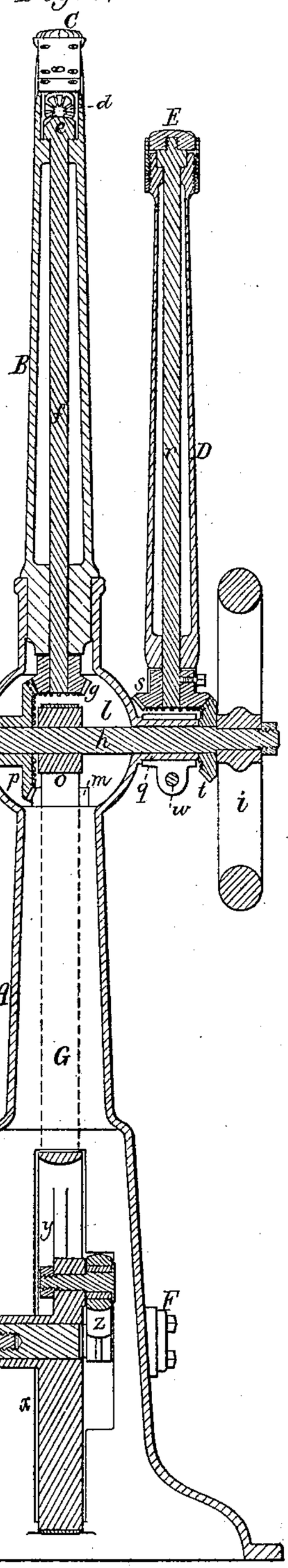


Fig. 5.

Fig. 4.



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UNITED STATES PATENT OFFICE.

WILLIAM B. ARNOLD, OF NORTH ABINGTON, MASSACHUSETTS.

MACHINE FOR RASPING PEGS.

SPECIFICATION forming part of Letters Patent No. 245,269, dated August 9, 1881.

Application filed June 13, 1881. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM B. ARNOLD, of North Abington, of the county of Plymouth and State of Massachusetts, have invented a new and useful Improvement in Machinery for Rasping Pegs when projecting into the foot-receiving space of a boot or shoe; and I do hereby declare the same to be described in the following specification, and represented in the accompanying drawings, of which—

Figure 1 is a side elevation, Fig. 2 a front view, Fig. 3 a longitudinal section, and Fig. 4 a transverse section, of a peg-rasping machine containing my invention. Fig. 5 is a longitudinal section of a heel-rasper-carrying arm, with the rasper and its operative shaft and gear, to be hereinafter described.

The nature of my said invention is duly set forth in the claims hereinafter presented.

In the drawings, A denotes the standard for supporting the carrying-arm B of the toe-rasper C, such arm being journaled in the upper part of such standard, so as to be capable of being revolved horizontally, a set-screw, *s'*, being used to clamp the arm in position. Within the said arm, which is tubular, is mechanism for revolving the toe-rasper, such mechanism consisting of bevel-gears *a b*, an inclined short shaft, *c*, two bevel-gears, *d e*, and a vertical shaft, *f*, provided at its lower end with a beveled gear, *g*, all being arranged as represented. The said gear *g* engages with another bevel-gear, fixed on a shaft, *h*, arranged horizontally in the standard and in suitable bearings therein, such shaft *h* being provided at one end with a fly-wheel, *i*.

The standard A is a hollow column, provided near its upper end with a spherical projection, *k*, within which is a chamber, *l*, having two lateral mouths or openings, *m n*, arranged to lead out of it in manner as represented. Within this chamber (which I term the "pulley-chamber") and fixed on the shaft *h* is a pulley, *o*, and a bevel-gear, *p*, the latter being made to engage with the gear *g* at the lower end of the shaft *f*. Furthermore, there projects from the part *k*, concentrically with the shaft *h*, a tubular journal, *q*, to which there is applied, as shown, the arm D, carrying the heel-rasper E and its operative shaft *r*, arranged in such arm, as set forth. At its lower end the shaft *r* has fixed to it a bevel-gear, *s*, to engage with another bevel-gear, *t*, fixed on the pulley-shaft *h*, and arranged as represented. The arm D is to turn upon the journal *q* in order to enable an attendant to adjust the arm into either a vertical or such an inclined position as may be most convenient for him, whether for package or use of the rasping-machine. This arm D, at its lower part, is furcated, as shown, and to each prong *u* of it there is a bearing, *v*, to fit to the journal, the two arms being provided with a screw, *w*, for clamping them to the journal, so as to enable the arm to be revolved therein with the necessary friction.

The lower part of the standard is perforated or open, as shown at *x*, to receive a driving-wheel, *y*, and its operative pedal *z*, the latter being placed alongside of the said wheel and pivoted to an arm, F, projecting from the standard. The wheel-shaft is to be properly supported by the standard in order for the pedal to be suitably connected with the wheel, which it is by means of a crank-pin extended from the latter into a slot formed lengthwise in the pedal. An endless belt, G, applied to the periphery of the driving-wheel, passes into and out of the pulley-chamber of the projection *k* by its mouths *m n*, and partly around the periphery of the pulley *o*.

On an attendant applying his foot to the pedal, and moving it, the driving-wheel will be put in revolution, so as to cause the belt to revolve the pulley and its shaft, and thereby simultaneously put in action the mechanism for operating each of the heel and toe raspers.

By having the driving-wheel and treadle and driving-belt and pulley arranged within the standard in manner as represented, the machine is rendered very compact, and by providing the standard with the tubular journal, and having the heel-rasper arm constructed and applied as explained to such journal, further advantage, as hereinbefore stated, is obtained.

What I claim as my invention is as follows, viz:

1. The supporting-standard A, having to its

part *k* the tubular journal *q* and the pulley-shaft *h* extended through it, and provided with the beveled gear *t*, in combination with the heel-rasper-carrying arm D, adapted to turn on such journal, and furnished with the rasper-shaft and its bevel-gear, to engage with the aforesaid bevel-gear *t*, all being arranged and adapted to operate substantially as set forth.

2. The heel-rasper-carrying arm D, tubular and furcated, and provided with journal-bearings and a clamp-screw, all substantially as set forth, in combination with the tubular standard A, having to its part *k* the tubular journal *q*, to enter the said journal-bearings, as specified.

3. The standard A, furnished with the peg-rasping mechanism, and provided with the pulley-chamber and its lateral mouths, and with the opening for reception of the driving-wheel and its pedal, and with the arm for supporting the said pedal, all being substantially as set forth.

4. The standard A, provided with the peg-rasping mechanism, and with the pulley-chamber and its tubular mouths, and with the opening and arm for reception and support of the driving-wheel and its pedal, in combination with the said driving-wheel and pedal, and the pulley and its shaft, arranged in such standard, as set forth.

5. The standard A, provided with the pulley-chamber and its lateral mouths, and tubular journal, arranged as described, in combination with the driving-wheel, pedal, endless belt, pulley, and pulley-shaft, arranged in the standard, and with the heel-rasper-carrying arm, adapted to turn upon the said tubular journal, and with the pulley-shaft provided with mechanism for actuating the heel-rasper, all being arranged and applied essentially as specified.

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Witnesses:
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