(No Model.) 2 Sheets—Sheet 1.

E. D. BROWN.

COMBINED BELT GUIDE AND REEL.

No. 360,992. Patented Apr. 12, 1887.

FIG. 1.

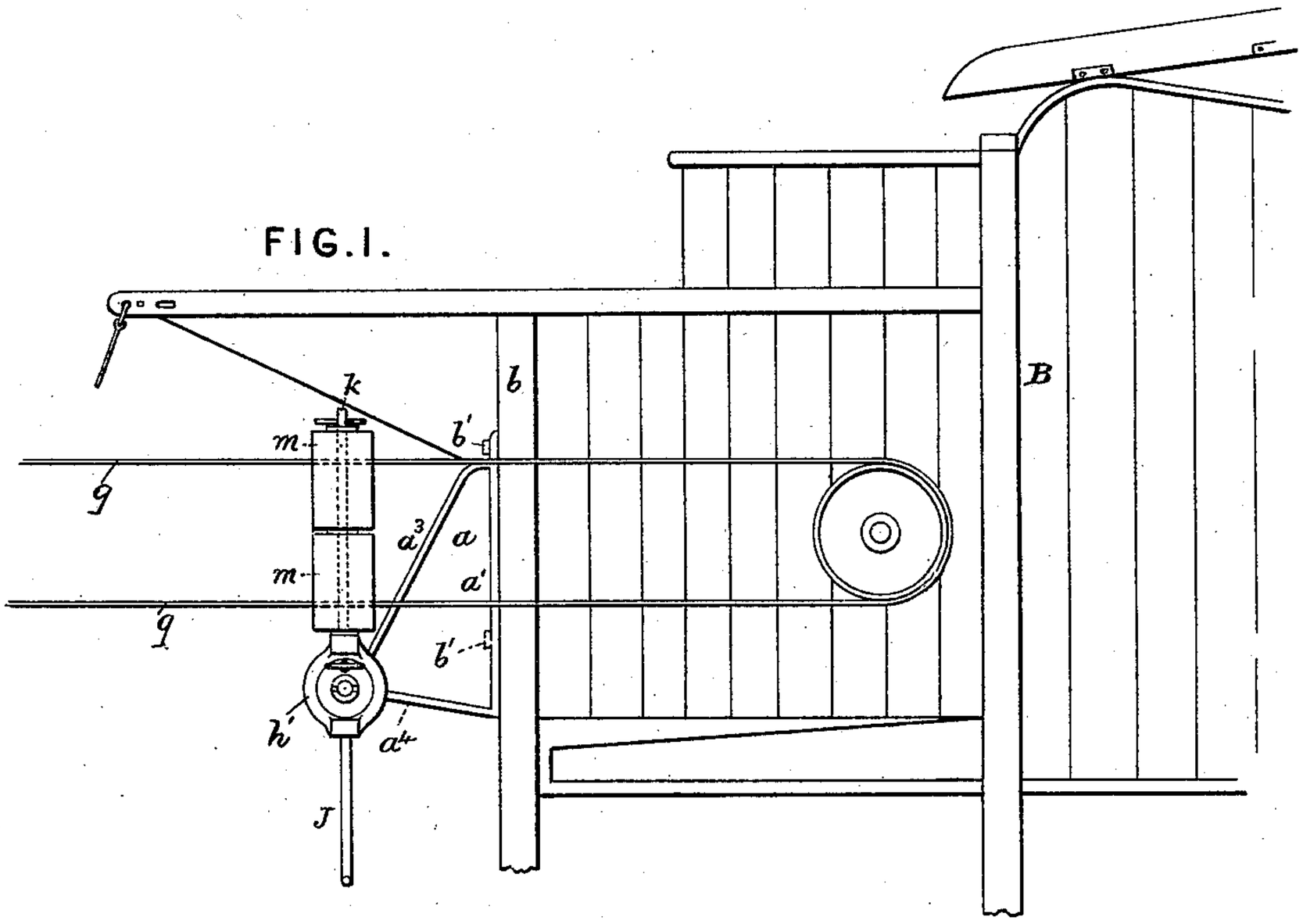
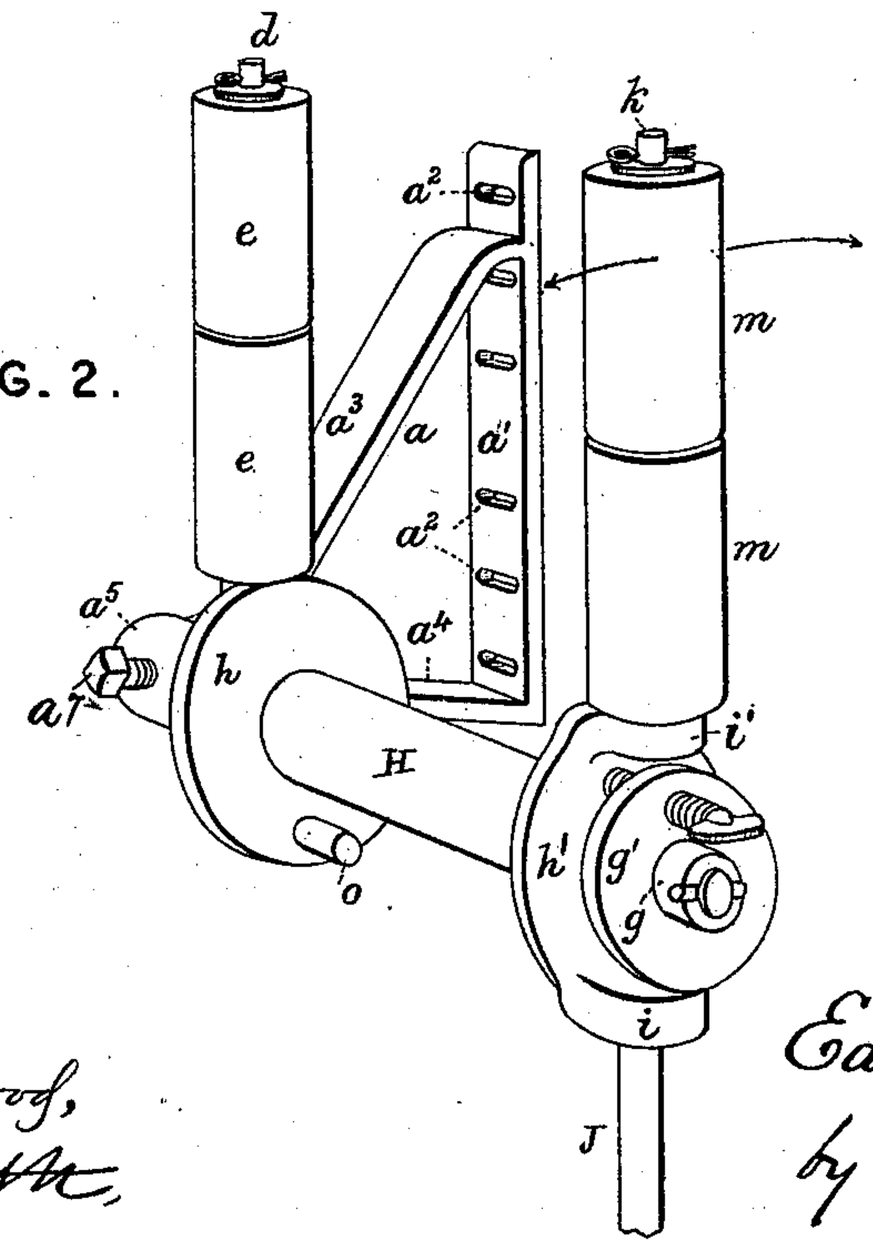


FIG. 2.



Attest.
Geo. T. Smallwood,
Rex. Smith,

Inventor:
Edmund D. Brown,
by A. M. Smith, atty.

(No Model.) 2 Sheets—Sheet 2.

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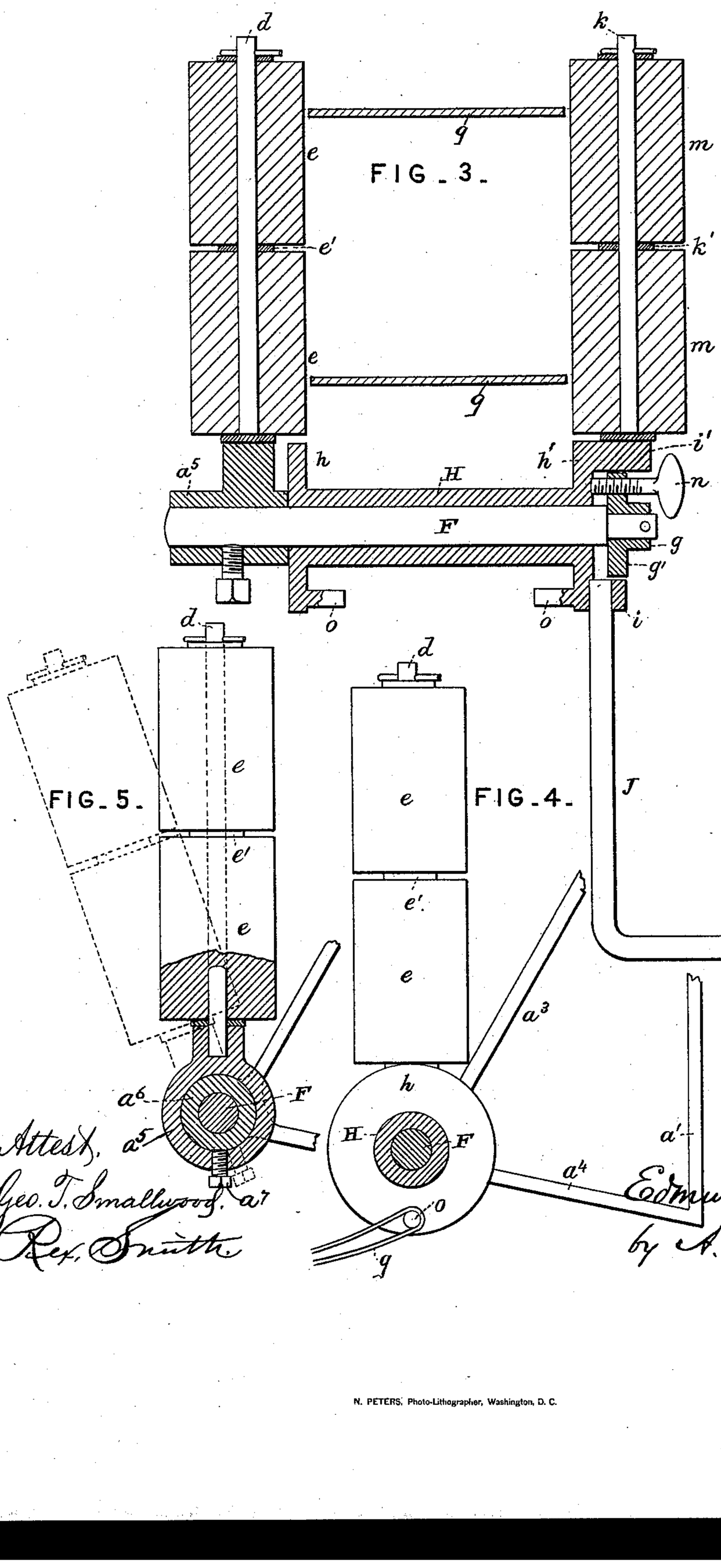

UNITED STATES PATENT OFFICE.

EDMUND D. BROWN, OF BATTLE CREEK, MICHIGAN, ASSIGNOR TO NICHOLS, SHEPARD & COMPANY, OF SAME PLACE.

COMBINED BELT GUIDE AND REEL.

SPECIFICATION forming part of Letters Patent No. 360,992, dated April 12, 1887.

Application filed January 27, 1887. Serial No. 225,670. (No model.)

To all whom it may concern:

Be it known that I, EDMUND D. BROWN, of Battle Creek, county of Calhoun, and State of Michigan, have invented a new and useful Improvement in a Combined Belt Guide and Reel, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, making part of this specification.

The object of this invention is to produce an attachment for portable machines which shall guide the driving-belt from the main-belt pulley of one machine to the driving-pulley of a separate portable engine or machine, so as to retain the driving-belt upon the two pulleys, although the alignment of the two machines may not be absolutely accurate.

A further object of the invention is to produce an attachment upon which a driving-belt may be readily reeled, so as to be conveniently transported with the portable machine in readiness for immediate use when required.

My invention is intended to be applied to various classes of portable machines, both such as furnish power—as, for instance, portable engines—and such as receive power—as is the case with thrashing-machines, &c., used in agriculture and other similar work.

In the class of machines above specified it is customary to employ two separate machines, usually transported by teams, as a thrasher and a portable engine, one machine to do the work and the other to furnish the power, and it is very difficult to place such machines in such exact alignment as will prevent accidental displacement of the driving-belt, either by imperfect alignment or by the action of the wind. These belts also are of such considerable length and of such material as renders their transportation difficult and productive of annoying delay in shipping and unshipping from two independent machines.

As will be seen from the ensuing description, I have produced an attachment which perfectly guides the belt from one machine to the other, and by means of which the belt may be quickly coiled up and transported upon either of the machines in readiness for instant use.

For the above purposes my invention consists in an attachment consisting of a guide designed to act upon both strands of the belt and a reel forming a part of the guide and upon which the belt may be wound or coiled for transportation with one or the other of the portable machines.

My invention further consists in certain peculiar and novel features of construction and arrangement, as hereinafter described and claimed.

In order that my invention may be fully understood, I will proceed to describe it with reference to the accompanying drawings, in which—

Figure 1 illustrates a part of a thrashing-machine with my improved attachment applied thereto. Fig. 2 is a perspective of the attachment. Fig. 3 is a sectional view of the same, the line of the section being taken through the axis of the reel. Fig. 4 is a detached view illustrating the manner of attaching the belt to the reel previous to winding the belt thereon, and Fig. 5 a modification in the form of the attachment.

In the said drawings, *a* designates a triangular bracket, the vertical portion *a'* of which is formed with a number of holes or eyes, a^2, arranged in two series of three holes in each series, registering with bolts *b'* upon a beam, *b*, of the frame of a thrasher or other portable machine, indicated at B, so that by inserting the bolts through the corresponding holes in two series the vertical height of the bracket may be varied, as desired. These holes are also elongated horizontally, so that the position of the bracket may be varied laterally to correspond with the position of the portable machine upon more or less uneven ground. At the junction of the parts a^3 a^4 of the bracket *a* is formed an eye or tubular socket, a^5, in which is inserted the end of the shaft or spindle of a reel, to be hereinafter described.

A vertical spindle, *d*, is formed contiguously with the eye or socket a^5, and preferably carries two independent rollers, *e*, separated from each other by a washer, *e'*. The spindle *d* may be formed on or secured rigidly to the bracket *a;* but in Fig. 5 said spindle is shown as mounted removably upon a collar, which surrounds a hub, a^6, upon the bracket. This collar is provided with a set-screw, a^7, by means of which the collar is held in any desired position of adjustment upon the hub, so

as to enable the spindle *d* to be set either upright or obliquely upon the bracket, so as to correspond with varying inclinations of the belt, as circumstances may require. In either event the spindle *k*, hereinafter described, is brought into line with the spindle *d* when the device is in use.

A shaft, F, is inserted at one end into the eye a^5, so as to extend horizontally outward therefrom, and upon the other end of the said spindle is keyed or otherwise detachably secured a collar, *g*, which is formed with an annular flange, *g'*, as shown. Between the inner margin of the eye or socket a^5 and the flange *g'* is confined a tubular sleeve or drum, H, upon each end of which is formed an annular integral flange, *h h'*, as best shown in Figs. 2 and 3. The outer annular flange, *h'*, of the drum H is formed with two laterally-extending lugs, *i i'*, into the former of which is inserted one end of a crank-arm, J, and into the latter, *i'*, one end of a spindle, *k*. This spindle preferably carries two independent rollers, *m*, separated by a washer, *k'*. A thumb-screw, *n*, extends horizontally through the flange *g'* of the collar *g*, before referred to, so as to bear against the outer flange of the disk *h* of the drum H, and, by pressing its opposite end against the eye a^5, to hold said drum in any desired position of adjustment. Each of the two flanges *h h'* is formed on its inner side with a horizontal inwardly-extending stud, *o*, both of which studs move around the spindle F, for a purpose to be hereinafter described.

The operation of the above-described device will be clearly understood, principally by referring to Fig. 1. As shown in the said figure, both strands of the driving-belt extend above the reel H and between the rollers *e m*, so that both of said strands are properly guided from the pulley N, which may be either that of the cylinder of the thrashing-machine, as shown, or the band-wheel of the portable engine, or otherwise, as circumstances may require. When it is desired to disconnect the engine from the thrashing-machine, or vice versa, the belt is thrown off from one pulley and a loop formed in the belt, said loop being engaged with the studs *o o* on the drum H, loosening the screw *n*, and so that by turning the handle or crank-arm J the belt *q* is wound upon the drum without disconnecting it from the pulley of the thrashing-machine, or otherwise, as the case may be. When the belt is extended from one of the machines, as indicated in Fig. 1, it is necessary that the two spindles *d k* should be exactly in line and rigidly retained in such position, and this is accomplished by tightening the thumb-screw *n*, before referred to.

It will be readily understood that each of the spindles *d k* may carry but one roller instead of two as shown, without departing from the spirit of my invention; but the two rollers for each spindle is a preferable arrangement, because the upper and lower strands of the belt are separately guided, and the frictional wear incident to the use of a single roller is avoided.

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

1. As an attachment for portable machines, a belt-guide composed of a spindle mounted upon a bracket-frame and arranged to carry one or more guiding-rollers and a reel or drum mounted upon a shaft extending from a socket, a^5, of the said frame and carrying a spindle which is movable relative to the bracket-spindle, substantially as described.

2. The combination, with a bracket carrying a roller-spindle, of the drum-shaft inserted laterally into an eye upon said bracket, a drum or reel mounted upon said shaft and carrying a roller-spindle movable relative to the bracket-spindle, and a collar carrying a thumb-screw for holding the reel in its required position of adjustment, substantially as set forth.

3. The combination, with the bracket and its spindle, of the reel-shaft inserted into an eye on said bracket and the reel mounted upon said reel-shaft and having the lugs *o* to receive the belt, a handle for turning the reel, and a roller-spindle movable relative to the bracket-spindle, substantially as specified.

In testimony whereof I have hereunto set my hand this 24th day of January, A. D. 1887.

EDMUND D. BROWN.

Witnesses:
FRANK W. DUNNING,
ALFRED A. ELLSWORTH.