J. C. TAFT.

Stopping Mechanisms for Drawing-Frames.

No. 144,162. Patented Oct. 28, 1873.

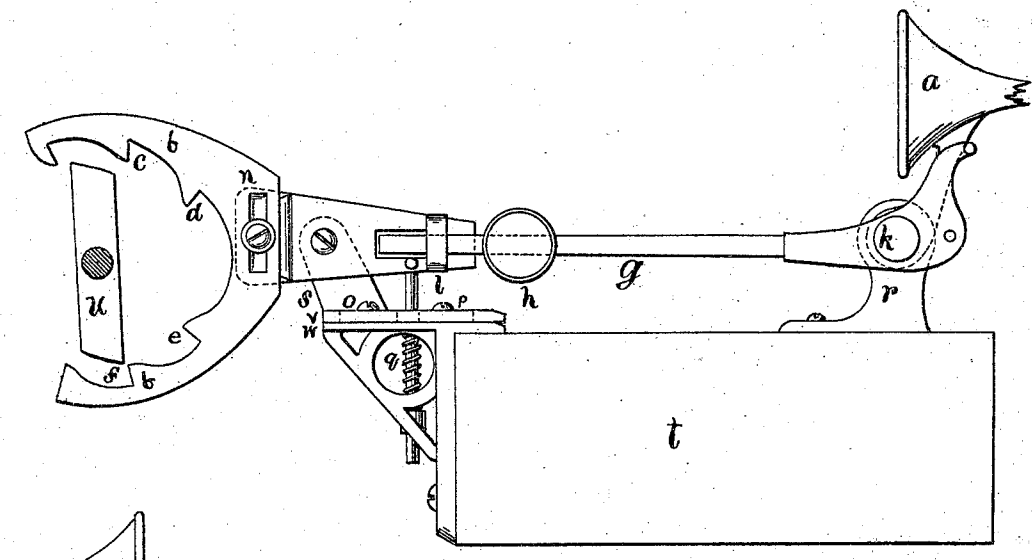

FIG. 1.

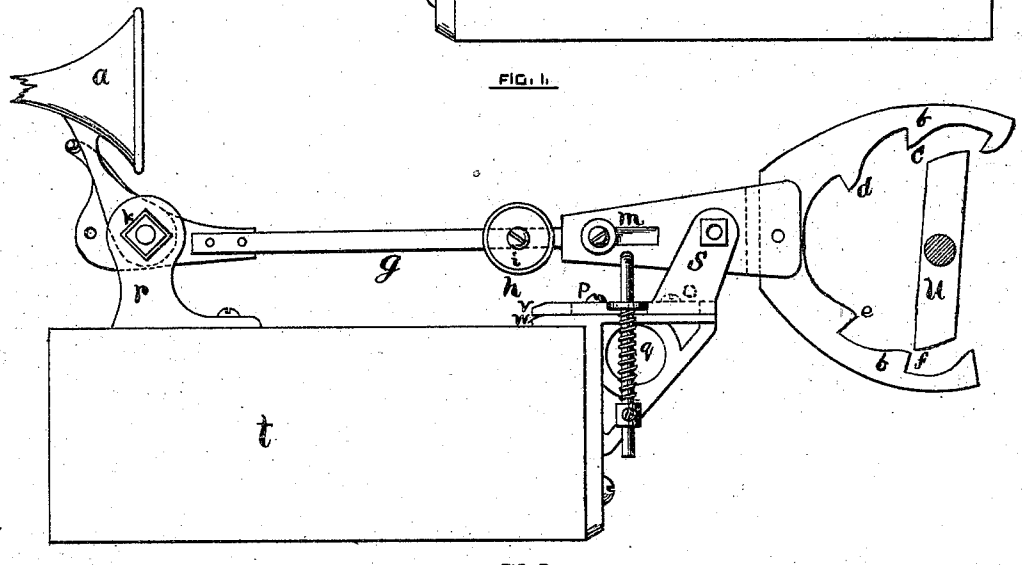

FIG. 2.

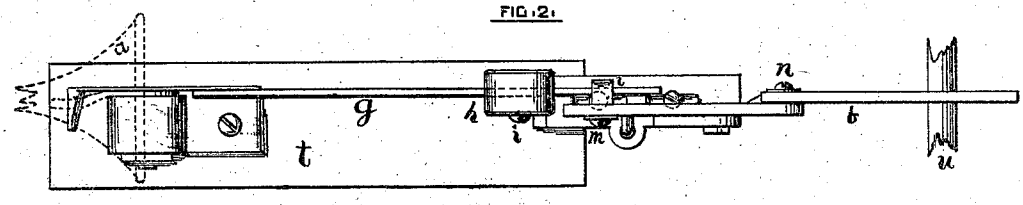

FIG. 3.

WITNESSES.

Isaac Lindsley

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JEROME C. TAFT, OF PAWTUCKET, RHODE ISLAND.

IMPROVEMENT IN STOPPING MECHANISMS FOR DRAWING-FRAMES.

Specification forming part of Letters Patent No. **144,162**, dated October 28, 1873; application filed August 18, 1873.

To all whom it may concern:

Be it known that I, JEROME C. TAFT, of Pawtucket, in the county of Providence and State of Rhode Island, have invented certain Improvements in Stop-Motion for Drawing-Frames and other similar machinery, of which the following is a specification:

The object of my said invention is to provide a simple, safe, and effective self-operating means for stopping the motion of the machinery with which it is connected whenever a cessation thereof may become necessary or desirable in consequence of the inevitable incidents that accompany the operation of said machinery. Said invention consists of a semicircular clutch connected with a lever that is attached to the trumpet of a drawing-frame, the said semicircular clutch containing four smaller clutches, and the whole having various adjustable features for the accommodation of said invention to the varied kinds and sizes of drawing-frames and other similar machinery now in use.

The accompanying drawing is hereby made a part of this specification, the indicating letters thereon referring to the same parts whenever repeated.

Figure 1 is a side view of said device, the trumpet and spiral spring being on the farther side. Fig. 2 is a view of the opposite side, and Fig. 3 is a top view of said device.

a is the trumpet; *b*, the semicircular clutch, containing the four smaller clutches, *c*, *d*, *e*, and *f*; *g*, the lever connecting the clutch *b* with the trumpet *a*; *h*, a slotted weight, regulating the operation of said lever *g*; *i*, a screw for the proper adjustment of said weight, and *k* the fulcrum of said lever. *l* is a loop, in which the end of the lever *g* rests, and by which the lever acts upon the semicircular clutch, the said loop being a little larger than the end of the lever in order to allow the incidental play and jar of said lever, but still sufficiently small to secure its prompt and effective operation. *m* is a screw and slot for adjusting the said loop to a longer or shorter lever. *n o p* are screws and slots for the more easy and perfect adjustability of said device to the varied kinds and sizes of drawing-frames and other similar machinery now in use. *q* is a spiral spring coiled around a projection from the rear of the semicircular clutch *b*, which said spring is an auxiliary to and regulator of the device when said lever is raised, and the clutch *b* thereby depressed. *r s* are supports for the lever and the semicircular clutch, with their contiguous parts. *t* is a part of the body of a drawing-frame, and *u* is the dog of the drawing-frame, which revolves within the semicircular clutch *b*, its extremities just escaping the smaller clutches *c*, *d*, *e*, and *f* when said device is properly adjusted for use. *v* and *w* form a table, on which the support *s* rests, the piece *v* containing the screws and slots *o p* for the purpose of adjustment, as aforesaid. The said several parts are to be made of any suitable materials.

The tension of the roving, sliver, or yarn, in passing through the trumpet *a*, keeps the lever *g* and the connected semicircular clutch *b* nearly or quite level, and the dog *u* is thereby allowed to freely revolve within said clutch; but if the said roving, sliver, or yarn, or any part thereof, becomes broken or attenuated, the tension is instantaneously reduced, the said lever falls and impels the semicircular clutch upward, and the dog *u* is thereby immediately arrested by one of the smaller clutches aforesaid, and the motion stops at once. If a knot, or any foreign substance, or undue thickness of said roving, sliver, or yarn, enters said trumpet, the said tension is instantaneously increased, the lever rises and impels the semicircular clutch downward, and, as before, the dog *u* is immediately arrested by one of the said smaller clutches, and the motion stops at once.

Said device, by means of the adjustable features aforesaid, may be attached to and used with any of the ordinary styles or sizes of drawing-frames or other similar machinery now used.

What I claim as new and embraced in this invention, and which I desire to secure by Letters Patent, is—

The combination, with the trumpet *a* and its lever *g*, of the semicircular clutch *b*, containing the smaller clutches *c*, *d*, *e*, and *f*, and the rotating dog *u*, all in the manner and for the purposes described.

JEROME C. TAFT.

Witnesses:

ISAAC LINDSLEY,

THOS. P. BARNEFIELD.