93. GEOMETRICAL INSTRUMENTS.

EXAMINER'S ROOM.

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No. 861,563. PATENTED JULY 30, 1907.

E. WEINGÄRTNER.

MECHANISM FOR PERIODICALLY INTERRUPTING THE RULING OF LINES.

Ref. on Back.

APPLICATION FILED JUNE 6, 1906.

2 SHEETS—SHEET 1.

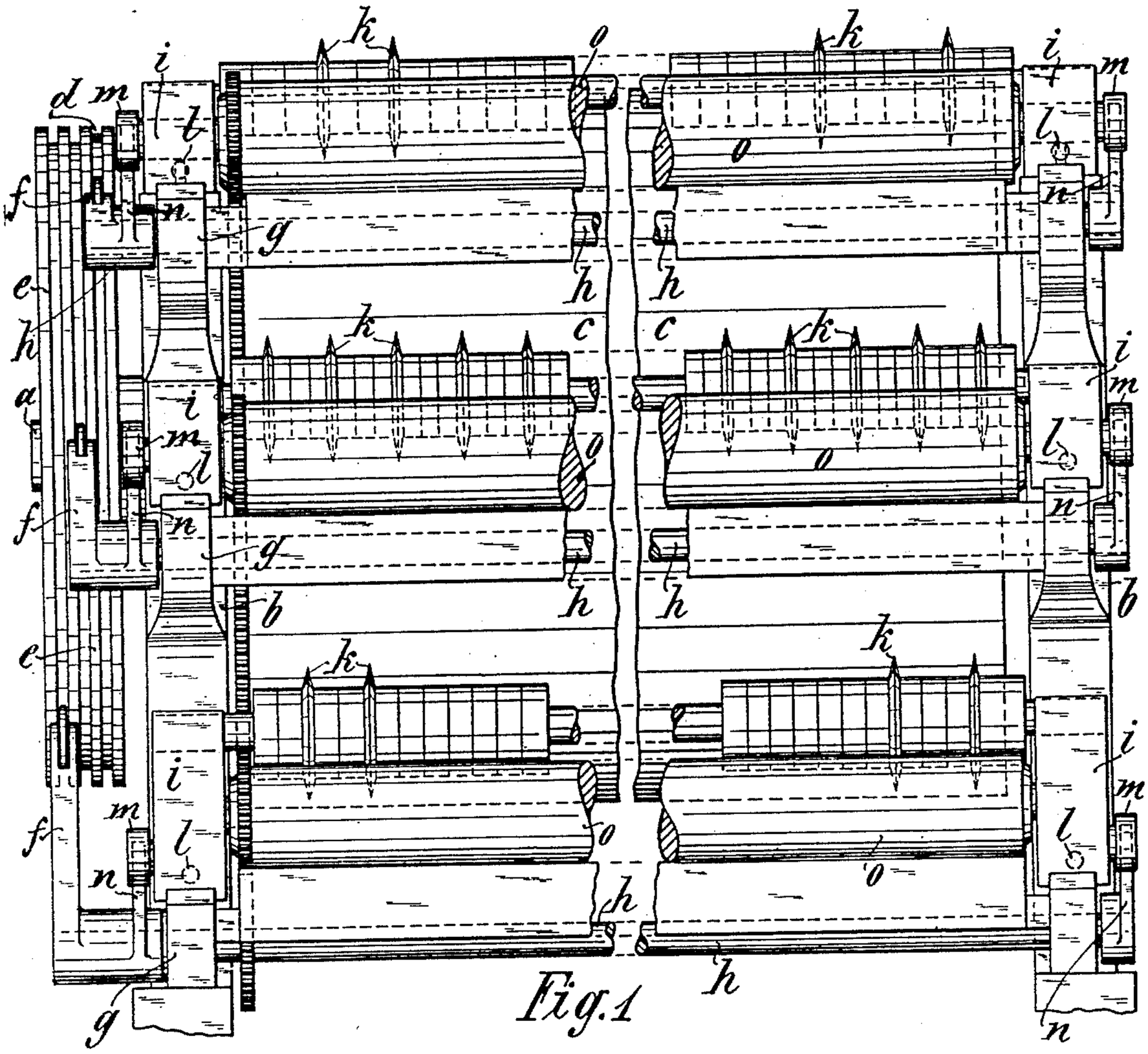

Fig. 1

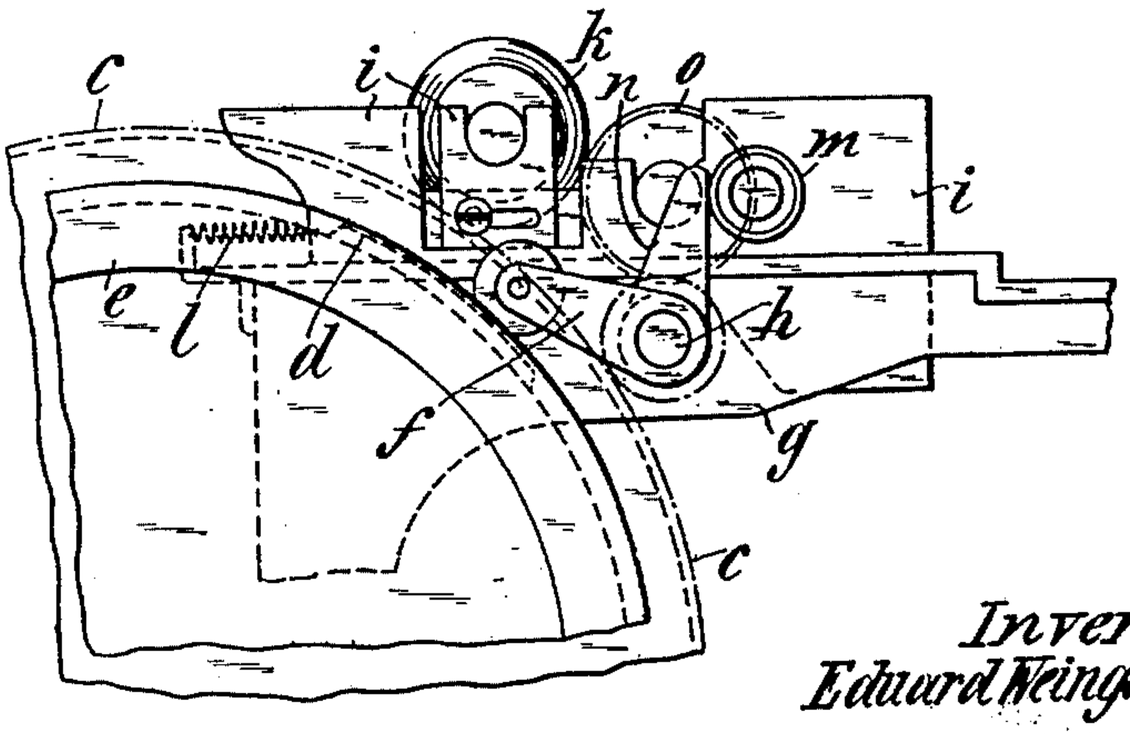

Fig. 3

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88. GEOMETRICAL INSTRUMENTS.

EXAMINER'S NUMBER.

No. 861,563. PATENTED JULY 30, 1907.

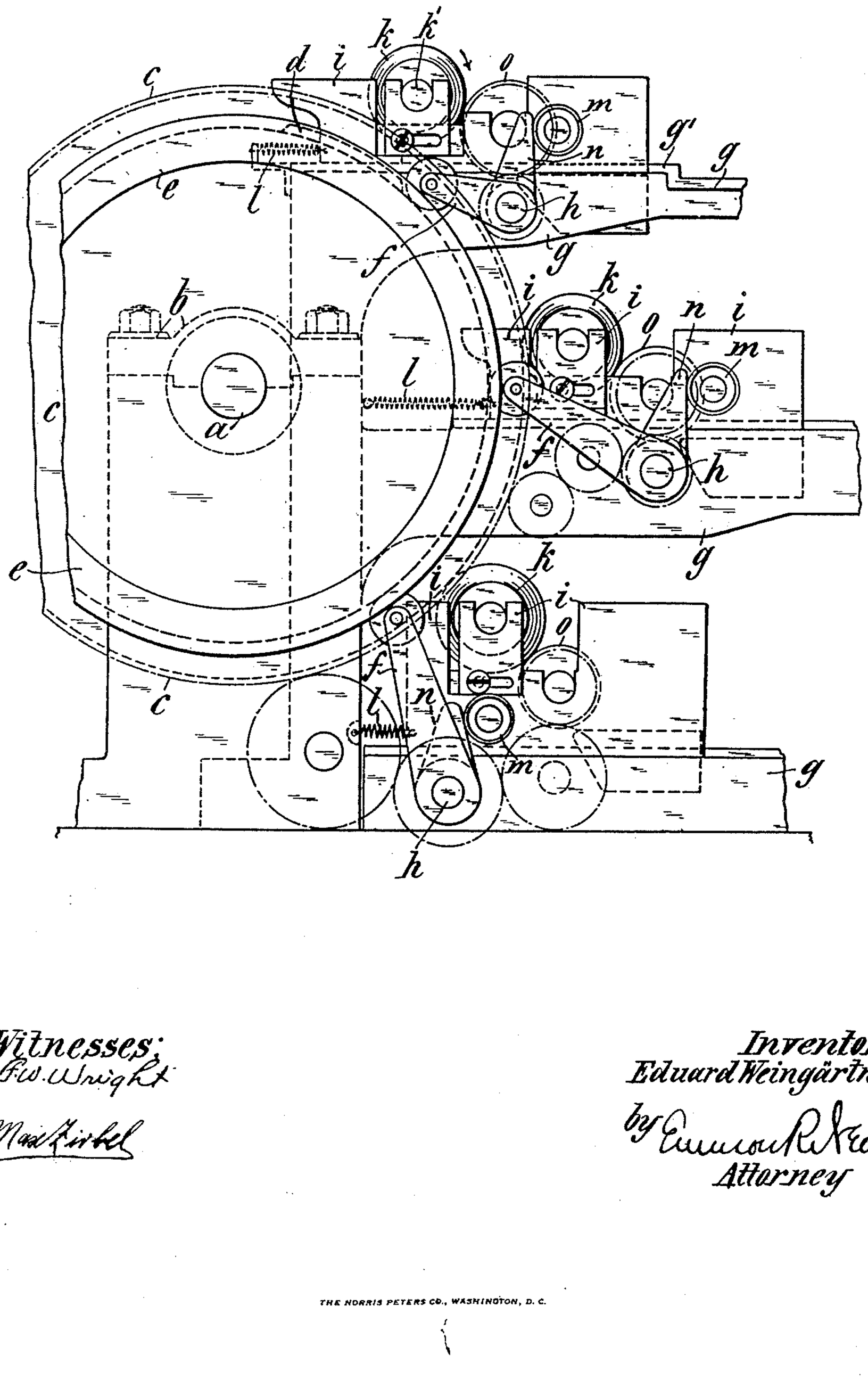
E. WEINGÄRTNER.

MECHANISM FOR PERIODICALLY INTERRUPTING THE RULING OF LINES.

APPLICATION FILED JUNE 8, 1906.

2 SHEETS—SHEET 2.

Fig. 2



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#730,923- Keach- R.U.-Pat.

UNITED STATES PATENT OFFICE.

EDUARD WEINGÄRTNER, OF LEIPZIG-LINDENAU, GERMANY.

MECHANISM FOR PERIODICALLY INTERRUPTING THE RULING OF LINES.

No. 861,563. Specification of Letters Patent. Patented July 30, 1907.

Application filed June 8, 1906. Serial No. 320,686.

To all whom it may concern:

Be it known that I, EDUARD WEINGÄRTNER, a citizen of the Republic of Switzerland, residing at Leipzig-Lindenau, Saxony, German Empire, have invented new and useful Improved Mechanism for Periodically Interrupting the Ruling of Lines, of which the following is a full, clear, and exact description.

The present invention relates to ruling machines and consists of improved mechanism for periodically interrupting the ruling of the lines, *i. e.* for periodically withdrawing the ruling disks from the drum or cylinder carrying the material being ruled.

The object of the invention is to produce an even quiet movement of the parts and to prevent shocks occurring when the ruling disks return to the cylinder or drum.

In order to render the present specification easily intelligible reference is had to the accompanying drawing in which similar letters of reference denote similar parts throughout the several views:—

Figure 1 is a front and Fig. 2 a part side elevation of a machine provided with the mechanism forming the object of the present invention and Fig. 3 is a part side elevation showing the ruling disks withdrawn from the drum or in their inoperative position.

The shaft *a* carrying the drum or cylinder *c* is mounted in the usual manner in bearings *b* and projects at one end through the same to provide a space for the accommodation of a cam disk *e* having arranged in grooves thereon at suitable intervals cams *d*. The machine frame is provided with upwardly extending arms *g g* having horizontal guide ways along the top and provided beneath the said guideways with bearings for a shaft *h* carrying an arm *f* having a roll at its free end to engage with the cams *d* of the disk *e*. This arm *f* is keyed to the shaft *h* as is also a finger *n* adapted to bear against a roll *m*. The shaft *k'* of the ruling disks *k* is mounted in bearings *i* guided in and adapted to slide in the guide ways *g'* of the arms *g* and being normally held against the drum *c* by means of springs *l*. The roll *m* is mounted on the bearing blocks *i* and advantageously two or more rolls *m* and fingers *n* are provided so that when the arm *f* is raised by the cam *d* of the disk *e*, the bearings carrying the shaft of the ruling disks *k* will be evenly pushed back.

The inking cylinders *o* are mounted in the reciprocated frame carrying the disks *k* and are of usual construction.

The operation of the device will be readily understood from the foregoing. As the cams *d* come round they pass gently under and raise the arm or arms *f*, this pushes the fingers *n n* backwardly and removes the ruling disks *k* from the drum or cylinder *c* thus periodically interrupting the lines being ruled.

While I have shown three sets of ruling shafts and their mechanisms in this case, I am not to be understood as limiting myself to any specific number. It will be noted by placing a straight edge on the line with the ruling disks shown in Fig. 1 that no two disks come into line with each other and each disk rules its independent line. The use of the plurality of shafts may arise from the desire to rule too closely for good work from one shaft or one shaft may be used for one color and another shaft for a different color as is often done in ruling ledgers.

I claim as my invention:—

1. In a ruling machine comprising a drum and a series of ruling disks mounted on a shaft, the combination of means for horizontally guiding the said shaft of the ruling disks, means for normally holding the said disks against the drum and means for periodically pushing the said disk shaft back from the drum in its guide ways, said ruling disks and shaft being mounted without obstructions above the same, whereby they may be readily removed.

2. In a ruling machine comprising a drum and a series of ruling disks mounted on a shaft, the combination of bearings for the said shaft, horizontal guide ways for the said bearings, rocking fingers bearing against said bearings and means for throwing said rocking fingers backwards and for normally holding the said bearings in their forward position substantially as described.

3. In a ruling machine comprising a drum and a series of ruling disks mounted on a shaft, the combination of bearings for the said disk shaft, horizontal guideways in which said bearings may move, springs to normally hold the bearings with the ruling disks against the drum, a shaft mounted in the machine frame, an arm keyed to said shaft and having a roll at its free end, a cam disk mounted on the drum shaft with which said roll engages, fingers also keyed to the shaft of the said arm and adapted to engage the said bearings with their free ends substantially as described.

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

EDUARD WEINGÄRTNER.

Witnesses:

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