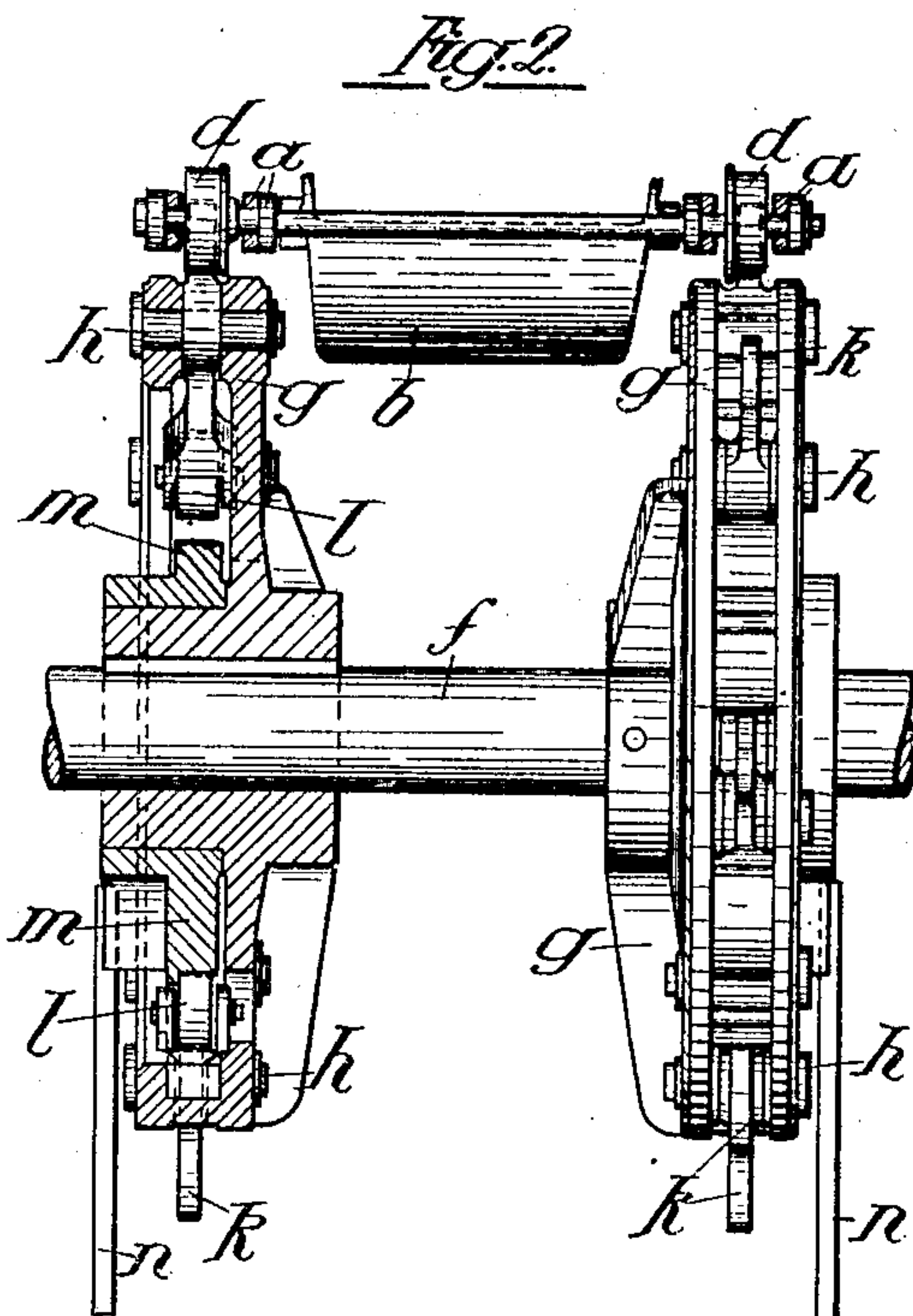
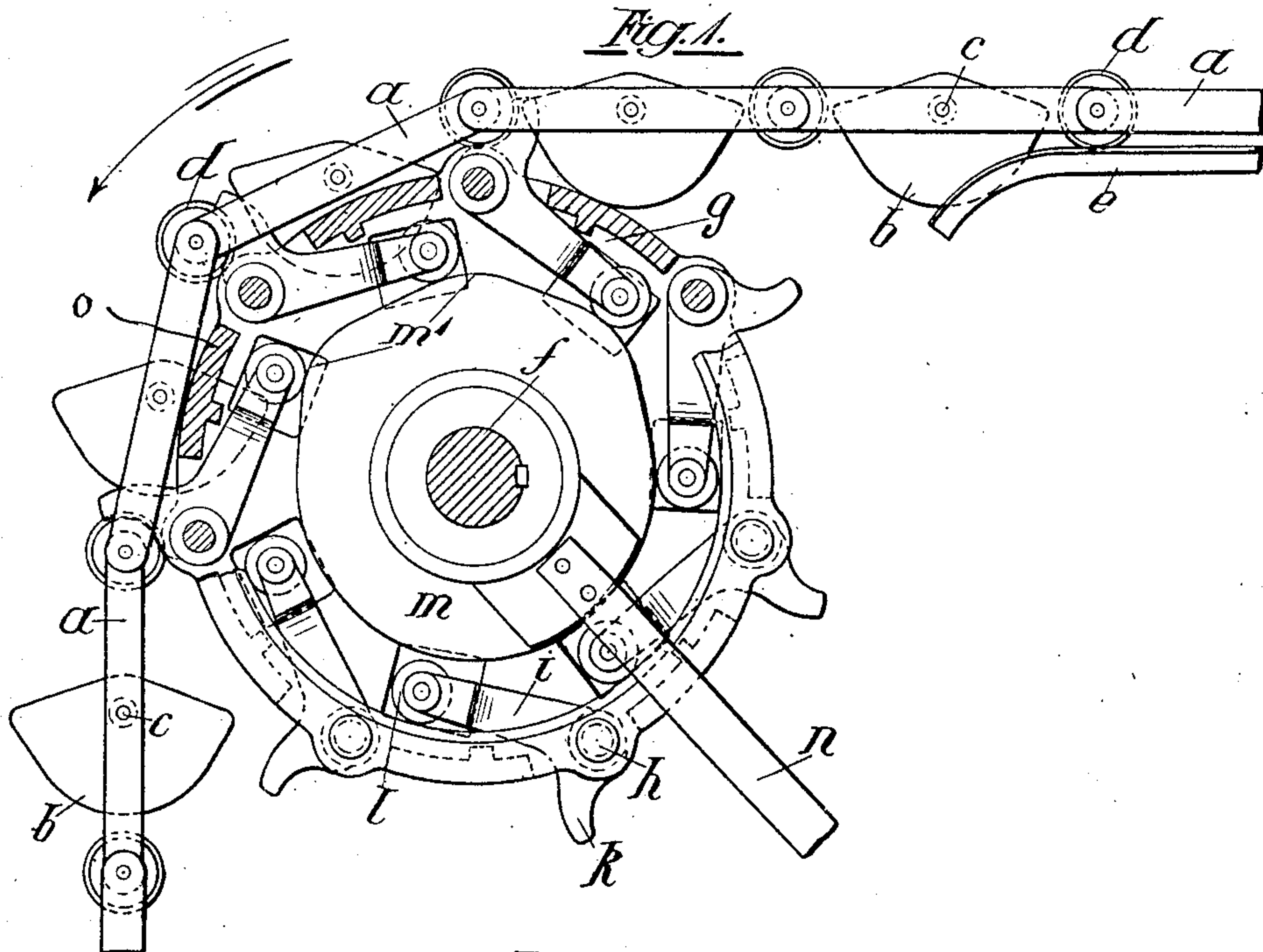


No. 869,488.

PATENTED OCT. 29, 1907.

G. VON HANFFSTENGEL.
DRIVING MECHANISM FOR CONVEYERS.

APPLICATION FILED JAN. 16, 1907.



WITNESSES;

Wm. H. Derrigan.
F. H. Logan.

INVENTOR,

GEORG VON HANFFSTENGEL
BY *Wm. Derrigan*
ATTORNEY.

UNITED STATES PATENT OFFICE.

GEORG VON HANFFSTENGEL, OF STUTTGART, GERMANY.

DRIVING MECHANISM FOR CONVEYERS.

No. 869,488.

Specification of Letters Patent.

Patented Oct. 29, 1907.

Application filed January 15, 1907. Serial No. 352,430.

To all whom it may concern:

Be it known that I, GEORG VON HANFFSTENGEL, a citizen of the German Empire, residing at Stuttgart, Reinsburgstrasse 142, Kingdom of Württemberg, Germany, have invented certain new and useful Improvements in Driving Mechanism for Conveyers and the Like; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to a driving mechanism for conveyers and the like, especially such with chains of long links, the purpose of which is, to effect a motion, which is even and free of shock. Such conveyers frequently are driven by chain wheels *i. e.* by rigid organs, which as is known, effect an uneven movement accompanied by jerks. The reason is, that the perpendicular distance of the chainlinks, which come into contact with the wheel, from the center is changing, which distance controls the motion of the chain. This uneven motion is very injurious to the material of the chain, so that often after some time of working a chain breaks, although it seems to have been made strong enough. The usual way to avoid this injury to the chains as far as possible is the use of a very low speed. In my invention I avoid this inconvenience by connecting the organs which seize and carry along the chain not rigidly with the drive, but guiding them by a suitably shaped curve and moving them in such a way that the otherwise uneven movement of the chain is compensated by the movement of these organs and becomes perfectly even. In order also to avoid the jerks which appear when the pitch of the chain is not accurate at the moment the chain comes into contact with the driver, the beginning of the curve is a little different from the theoretical curve, so that these organs come into contact gradually. The drive therefore works altogether evenly and smoothly, so that the speed can be considerably higher than when rigid wheels are used. Other mechanisms are known designed for the same purpose. But their drawback, which is very essential for conveyers, is, that they can be applied only to the straight part of the conveyer and always form an addition to the whole for which in many cases it is hard to find room, while the drive invented by me, is put in only in the place of deflecting organs which would be necessary anyhow.

The accompanying drawing shows a way how my invention can be put to work.

Figure 1 is a side view and partly a section; Fig. 2 a front view of Fig. 1 and partly a section.

The driving mechanism invented by me serves to

drive conveyers which themselves are known, especially such with chains of long links, and the like. The conveyer consists for instance of the endless chain *a*, formed of double links, to which the buckets *b* are pivoted by the pins *c*. On the straight part of the conveyer the chain *a* is guided by rollers *d*, moving on rails *e*.

The driving mechanism consists of the wheels *g*, keyed to the driving shaft *f*, to which a convenient number of bent levers *i* is fastened, which have suitably shaped catches to take hold of the chain rollers *d*. At their free end the bent levers *i* carry rollers *l*, moving on curved disks *m* which are located loosely on the shaft *f* or on the hubs of the driving wheels *g* and are kept from revolving by arms *n* fastened to the structure, or the like. The curved part *m*¹ of the disks *m* is shaped in such a way that the catches *k* begin slowly to take hold of the chain rollers, whereupon they get a gradually increasing and then gradually decreasing speed, compensating for the irregularities which otherwise would appear. The guided ends of the bent levers are kept from falling out, when the driving wheel revolves, by webs *o*, on which the levers *i* rest.

I claim as my invention:

1. In a driving mechanism for conveyers and the like, a driving wheel and a conveyer passing around and engaging said wheel, the latter having levers pivoted thereto at intervals, one end of each lever projecting from the wheel and constituting a catch and the other end of each lever provided with a roller, and a fixed disk whose periphery is engaged by the rollers aforesaid as the wheel revolves and is formed to move the aforesaid catches gradually into engagement with the conveyer and to positively maintain said engagement while the conveyer is in engagement with the wheel.

2. In a driving mechanism for conveyers and the like, a driving wheel and a conveyer passing around and engaging said wheel, the latter having levers pivoted thereto at intervals, one end of each lever projecting from the wheel and constituting a catch and the other end of each lever provided with a roller, and a fixed disk whose periphery is engaged by the rollers aforesaid as the wheel revolves and is formed to lift the aforesaid catches and to gradually project the same from the wheel while positively maintaining the same in engagement with the conveyer.

3. In a driving mechanism for conveyers and the like, a driving wheel having levers pivoted thereto at intervals, one end of each lever projecting from the wheel and constituting a catch and the other end of each lever provided with a roller, and a fixed disk whose periphery is engaged by the rollers aforesaid as the wheel revolves and is provided with a succession of separate cams.

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

GEORG VON HANFFSTENGEL.

Witnesses:

HERMANN HOPPE,
RUDOLF BRECHT.