No. 800,413. PATENTED SEPT. 26, 1905.

C. H. STEHLING.

HIDE REEL.

APPLICATION FILED JAN. 18, 1904.

3 SHEETS—SHEET 1.

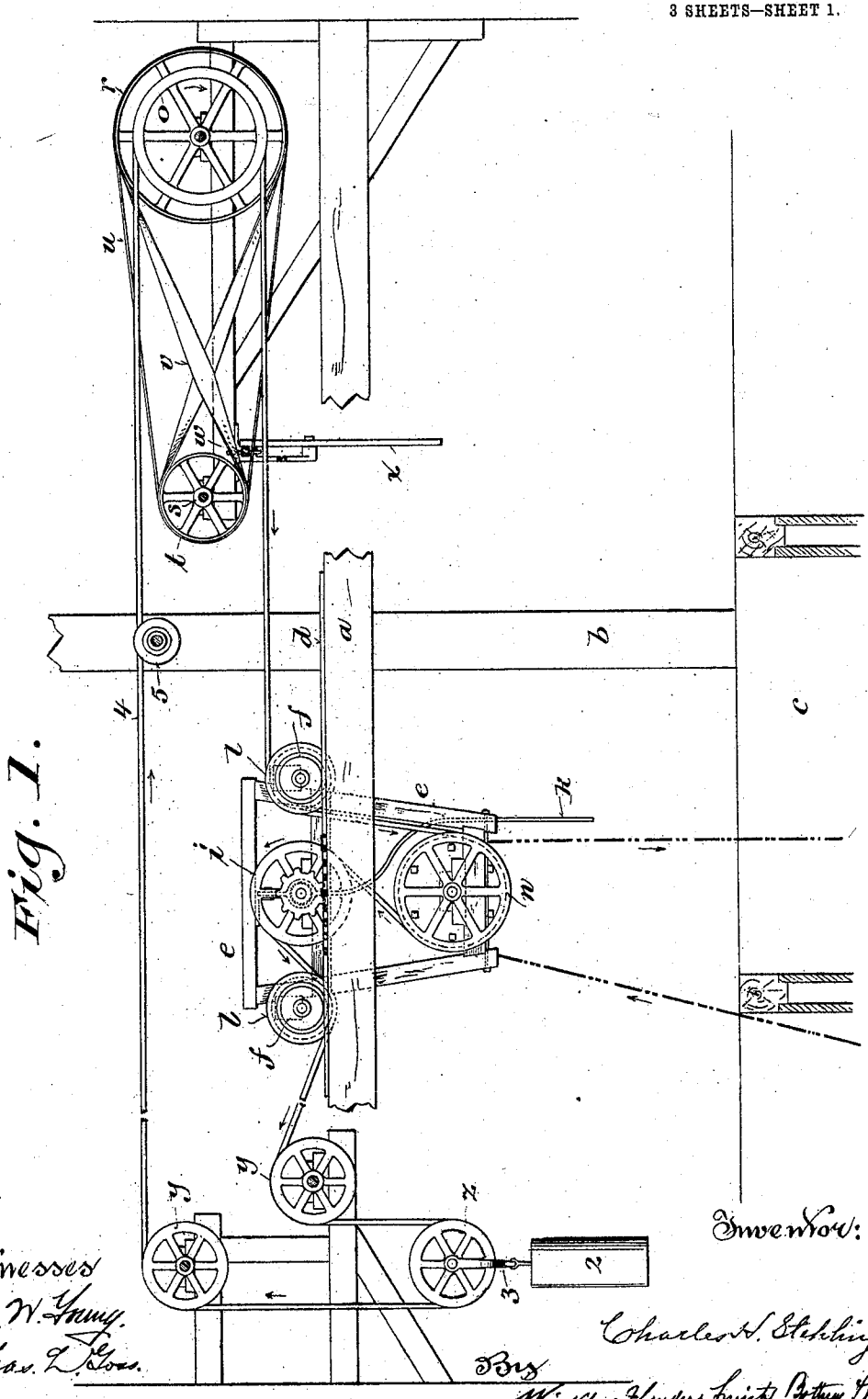


Fig. 1.

Witnesses
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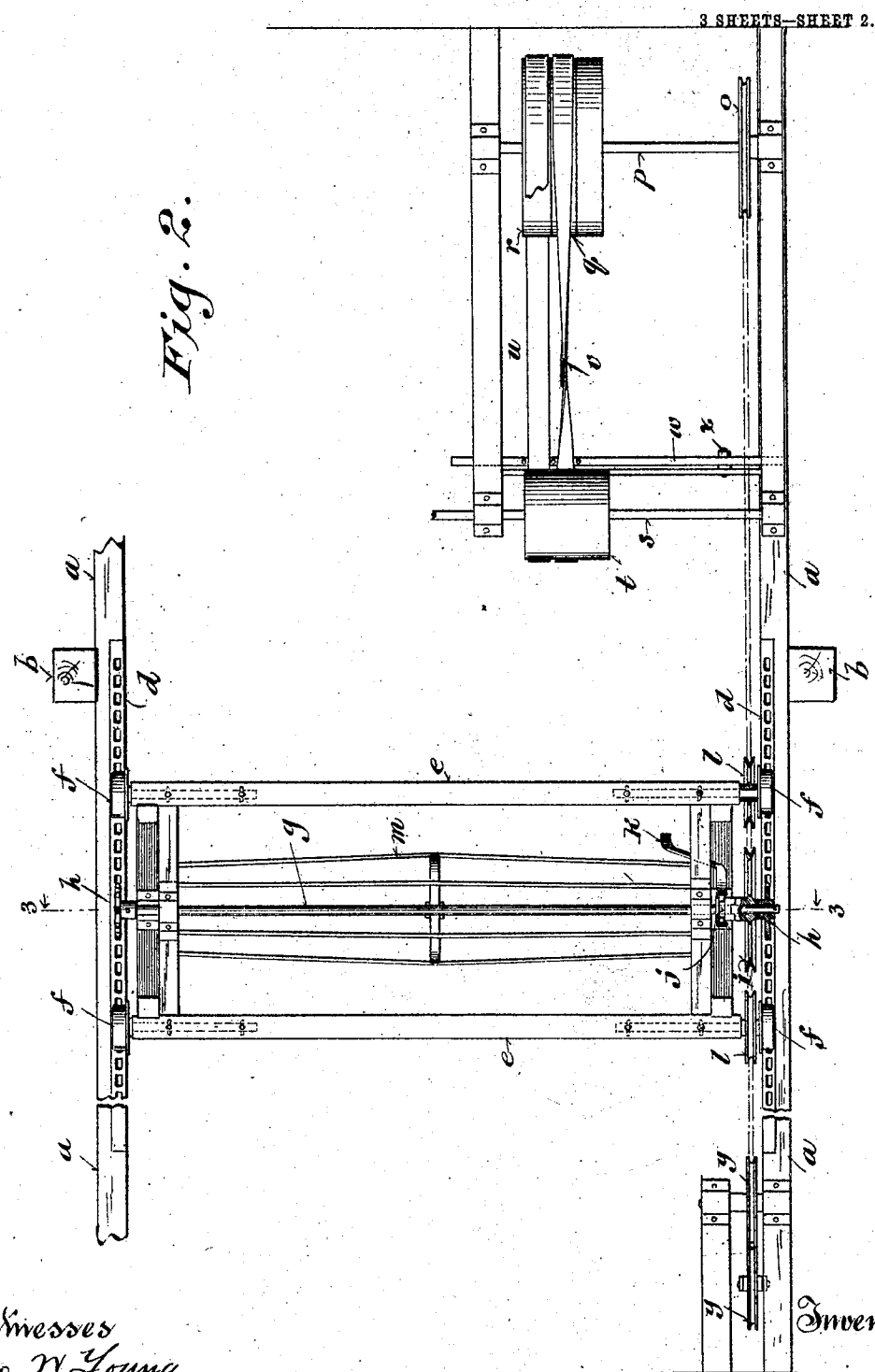
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3 SHEETS—SHEET 2.

Fig. 2.



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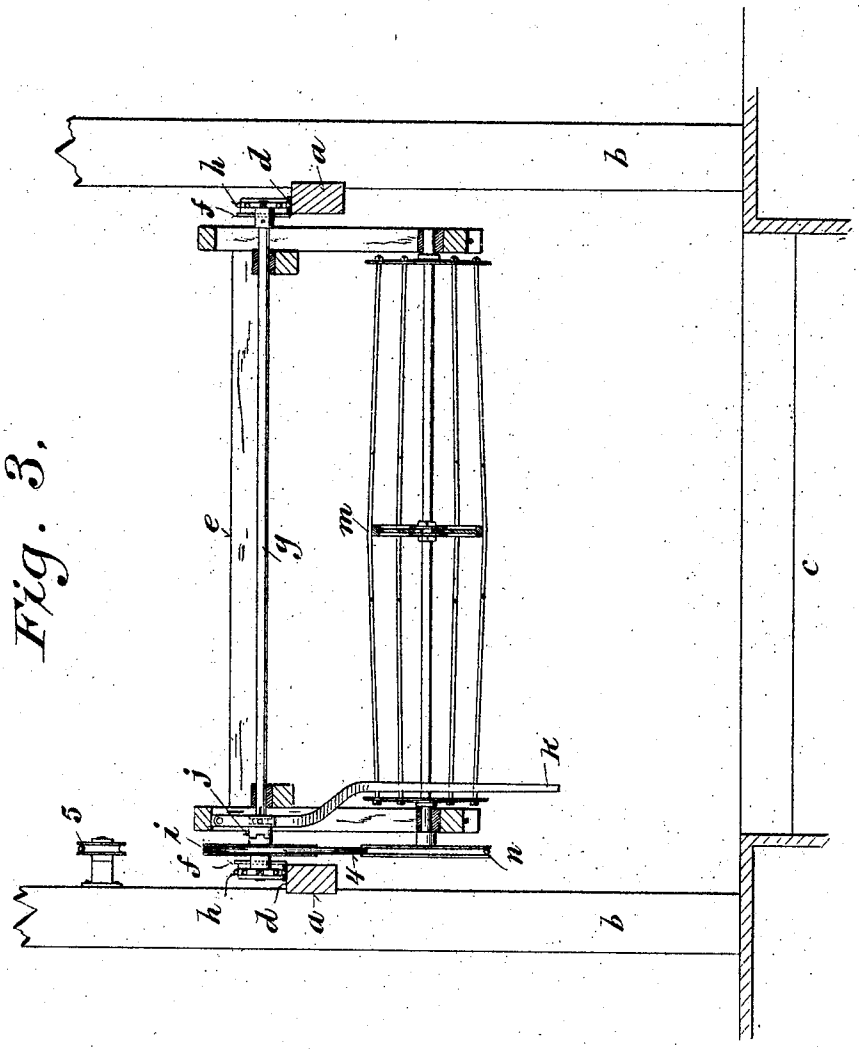
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3 SHEETS—SHEET 3.

Fig. 3.



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UNITED STATES PATENT OFFICE.

CHARLES H. STEHLING, OF MILWAUKEE, WISCONSIN.

HIDE-REEL.

No. 800,413. Specification of Letters Patent. Patented Sept. 26, 1905.

Application filed January 18, 1904. Serial No. 189,417.

To all whom it may concern:

Be it known that I, CHARLES H. STEHLING, a citizen of the United States, residing at Milwaukee, in the county of Milwaukee and State of Wisconsin, have invented certain new and useful Improvements in Hide-Reels, of which the following is a specification, reference being had to the accompanying drawings, forming a part thereof.

The main objects of this invention are to facilitate the transfer of hides in tanneries from one vat to another and generally to improve the construction and operation of devices of this class.

It consists in certain novel features of construction and in the peculiar arrangement and combinations of parts, as hereinafter particularly described, and specified in the claims.

In the accompanying drawings like characters designate the same parts in the several figures.

Figure 1 is an end elevation of a hide-reel with its supporting and driving connections in side elevation constructed and arranged in accordance with my invention. Fig. 2 is a plan view of the same; and Fig. 3 is a vertical longitudinal section of the reel and a cross-section of its ways on the line 3 3, Fig. 2.

a a are parallel horizontal ways supported at suitable intervals by uprights *b* above and parallel with a series of vats *c c*. The ways *a* are provided with rack-rails *d*.

e is a carriage provided at the ends with flanged guiding and supporting wheels *f*, which are adapted to travel on the rails *d*.

g is a shaft journaled in the upper part of the carriage-frame lengthwise thereof and provided at the ends with toothed propelling-wheels *h h*, which engage with the rack-rails *d*. On this shaft *g* is loosely mounted next to one of the wheels *h* a grooved sheave or pulley *i*, and on the opposite side of this sheave or pulley a clutch-collar *j* is feathered on said shaft and movable into and out of engagement with a clutch member on the hub of said sheave or pulley. *k* is a lever fulcrumed to the carriage-frame and pivotally connected with said clutch-collar for throwing the same into and out of engagement with the hub of said sheave or pulley.

l l are guiding sheaves or pulleys mounted on the carriage in the same plane with and on opposite sides of the sheave or pulley *i*. These sheaves or pulleys *l* may be conveniently journaled on the shafts or spindles that carry the carriage guiding and supporting wheels *f* at that end of the carriage.

m is a rotary drum, preferably constructed in the form of a skeleton frame, journaled at the ends in the carriage-frame below and parallel with the shaft *g*. To one end of the drum-shaft or to one of its journals is fixed in the same plane with the sheaves or pulleys *i* and *l* a sheave or pulley *n*.

At or near one end of one of the ways *a* a driving sheave or pulley *o* is mounted on a transverse shaft *p* in the same plane with the sheaves or pulleys on the carriage. The shaft *p* is provided with a fixed pulley *q* and a loose pulley *r* on each side of it.

s is a driving-shaft parallel with the shaft *p* and provided with a wide-faced pulley *t*, which is connected by straight and cross belts *u* and *v* with the fixed and one of the loose pulleys *q* and *r* on shaft *p*.

w is a sliding belt-shifting bar operated by a lever *x* for reversing the rotation of the sheave or pulley *o*. At or near the opposite end of the carriage-ways two guiding sheaves or pulleys *y y* are arranged one above the other in the same plane with the driving sheave or pulley *o* and the sheaves or pulleys on the carriage. *z* is a similar grooved sheave or pulley from which a weight 2 is suspended by a yoke 3.

An endless cable or belt 4 passes around the driving-sheave *o*, thence on the under side over one of the guiding-sheaves *l* on the carriage, thence under and around the sheave *n* on the rotary drum, thence over and around the sheave *i* on the shaft *g*, thence under the other guiding-sheave *l* on the carriage, thence over the lower guiding-sheave *y* at the other end of the carriage-ways, thence around the weighted sheave *z*, thence upwardly over the upper guiding-sheave *y*, and thence back to the driving-sheave *o*. The upper part of the belt 4 is supported at intervals by guiding-sheaves 5 on the uprights *b* or other supports. The weighted sheave *z* serves to automatically take up the slack in the belt 4.

My improved hide-reel is operated as follows: When it is desired to transfer hides from one vat *c* to another, the carriage *e* is moved to the proper point over the vats by connecting the sheave *i* with the shaft *g* and throwing the belt-shifter by the lever *x* into the proper position to turn the sheave *o* in

the required direction. When the carriage arrives at the desired point, its movement is arrested by disengaging the clutch-collar *j* from the hub of the sheave *i*. This is accomplished by means of the lever *k* without necessarily stopping the belt 4. The hides being hooked together at their edges in the usual way, one end of the series is thrown over the rotary drum *m*, which is turned by the sheave *o* through the connections hereinbefore described in the proper direction to run the hides from one vat to the other, as indicated by the heavy dotted line on Fig. 1.

It is obvious that the drum *m* may be turned and the carriage may be moved on its ways in either direction, according to the position of the straight and cross belts *u* and *v* on the pulleys *q* and *r*.

Instead of making the carriage and rotary drum in a single length to span a single tier or row of vats, as shown in the drawings, they may be extended to span two or more rows of vats, the drum being constructed in sections like or similar to that shown or otherwise and supported between the sections by intermediate bearings.

By mounting the reel on elevated ways it is out of the way when not in use, and by providing driving connections, as herein shown and described, it is easily and quickly transferred to any point where it may be needed.

Various changes in details of construction and arrangement of parts may be made without materially affecting the operation of the reel and without departing from the principle and intended scope of the invention.

Under certain conditions the ways for the reel-carriage may be arranged on the floor or near the top of the vats.

I claim—

1. In a hide-reel the combination with ways, of a carriage provided with propelling-wheels adapted to run on said ways, a sheave mounted on said carriage and adapted to turn said wheels, a rotary drum mounted on said carriage and provided with a sheave in the plane of the propelling-wheel sheave, sheaves located at the ends of said ways in the plane of the sheaves on said carriage, and an endless driving-belt passing around said sheaves, substantially as described.

2. In a hide-reel the combination with ways, of a carriage provided with propelling-wheels adapted to run on said ways and connected by a shaft on which they are fixed, a sheave loosely mounted on said shaft, a clutch for connecting said sheave and shaft, a rotary drum mounted on said carriage and provided with a sheave in the plane of the sheave on said shaft, sheaves located at the ends of said ways in the plane of the sheaves on the carriage, and a reversible endless driving-belt passing around said sheaves, substantially as described.

3. In a hide-reel the combination with ways, of a carriage provided with propelling-wheels adapted to run on said ways and connected by a shaft, a sheave mounted on said shaft, a rotary drum mounted on said carriage and provided with a sheave in the plane of the sheave on said shaft, guiding-sheaves mounted on said carriage in the same plane with and on opposite sides of the other sheaves, sheaves located at the ends of said ways in the plane of the sheaves on said carriage, and an endless driving-belt passing around the several sheaves, substantially as described.

4. In a hide-reel the combination of ways, a carriage adapted to travel on said ways and provided with propelling-wheels, a rotary drum mounted on said carriage, sheaves for turning said propelling-wheels and drum mounted on said carriage one above the other in the same plane, guiding-sheaves also mounted on said carriage in the same plane with and on opposite sides of the first-mentioned sheaves, a driving-sheave and two guiding-sheaves arranged at the ends of the ways in the plane of the sheaves on said carriage, an endless driving-belt passing around the sheaves at the ends of the ways and around the sheaves on the carriage, a weighted sheave suspended on the looped end of said belt opposite the driving-sheave, and means for reversing the movement of the driving-sheave, substantially as described.

5. In a hide-reel the combination with ways provided with racks, of a carriage adapted to travel on said ways and provided with toothed propelling-wheels engaging said racks and with a sheave or pulley loosely mounted on the propelling-wheel shaft, a clutch for connecting said sheave and shaft, a rotary drum supported by said carriage and provided with a sheave or pulley at one end in the plane of the sheave or pulley on the propelling-wheel shaft, and an endless belt passing around said sheaves or pulleys and around driving and guiding sheaves or pulleys at the ends of said ways, substantially as described.

6. In a hide-reel the combination with ways provided with rack-rails, a carriage having guiding-wheels arranged to run on and to engage with said rails, a sheave or pulley loosely mounted on the propelling-wheel shaft, a clutch for connecting and disconnecting said sheave or pulley and shaft, a rotary drum mounted on said carriage and provided with a sheave or pulley, guiding sheaves or pulleys mounted on said carriage in the plane of the other sheaves or pulleys and on opposite sides thereof, driving and guiding sheaves or pulleys at the ends of said ways, and an endless belt passing around said sheaves or pulleys, substantially as described.

7. In a hide-reel the combination with parallel horizontal ways, provided with rack-rails, of a carriage provided with toothed propelling-wheels engaging said rack-rails, a sheave or pulley loosely mounted on the propelling-wheel shaft, a clutch for connecting and dis-

connecting said shaft and said sheave or pulley, a rotary drum mounted on said carriage and provided with a sheave or pulley, guiding sheaves or pulleys on said carriage in the same plane with and on opposite sides of the other sheaves or pulleys, a driving sheave or pulley at one end of said ways, two guiding sheaves or pulleys at the other end, an endless belt passing around the sheaves or pulleys at the ends of the ways, and on one side around the sheaves or pulleys on the carriage and a weighted sheave or pulley suspended on said belt at the end opposite the driving-sheave or pulley, substantially as described.

In witness whereof I hereto affix my signature in presence of two witnesses.

CHARLES H. STEHLING.

Witnesses:

CHAS. L. GOSS,

HERBERT MANGER.