

(No Model.)

W. H. CORNELL.
SECTIONAL SCREW CONVEYER.

No. 409,454.

Patented Aug. 20, 1889.

FIG. 1.

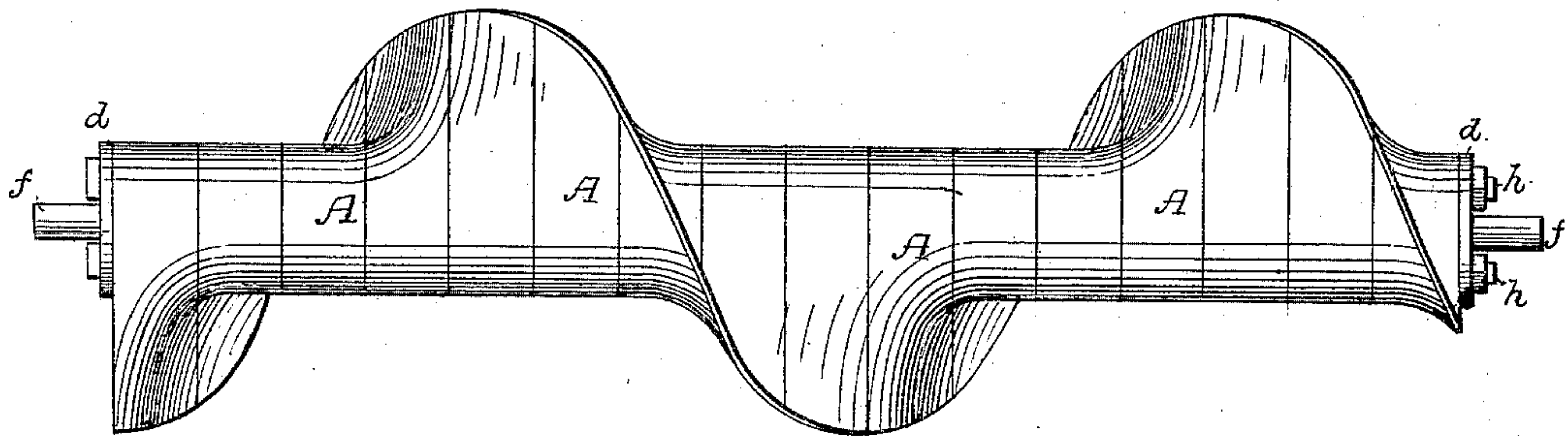


FIG. 3.

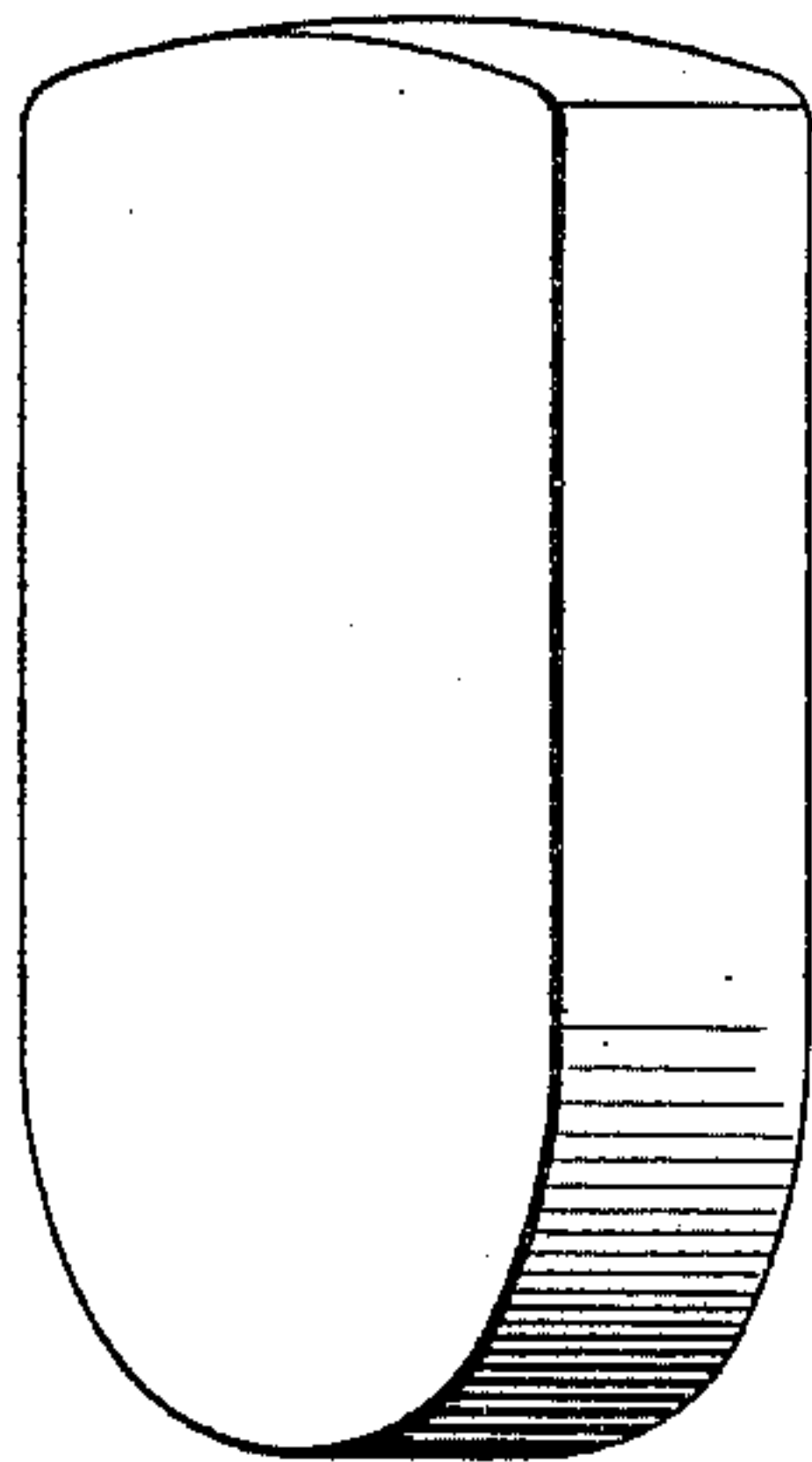


FIG. 4.

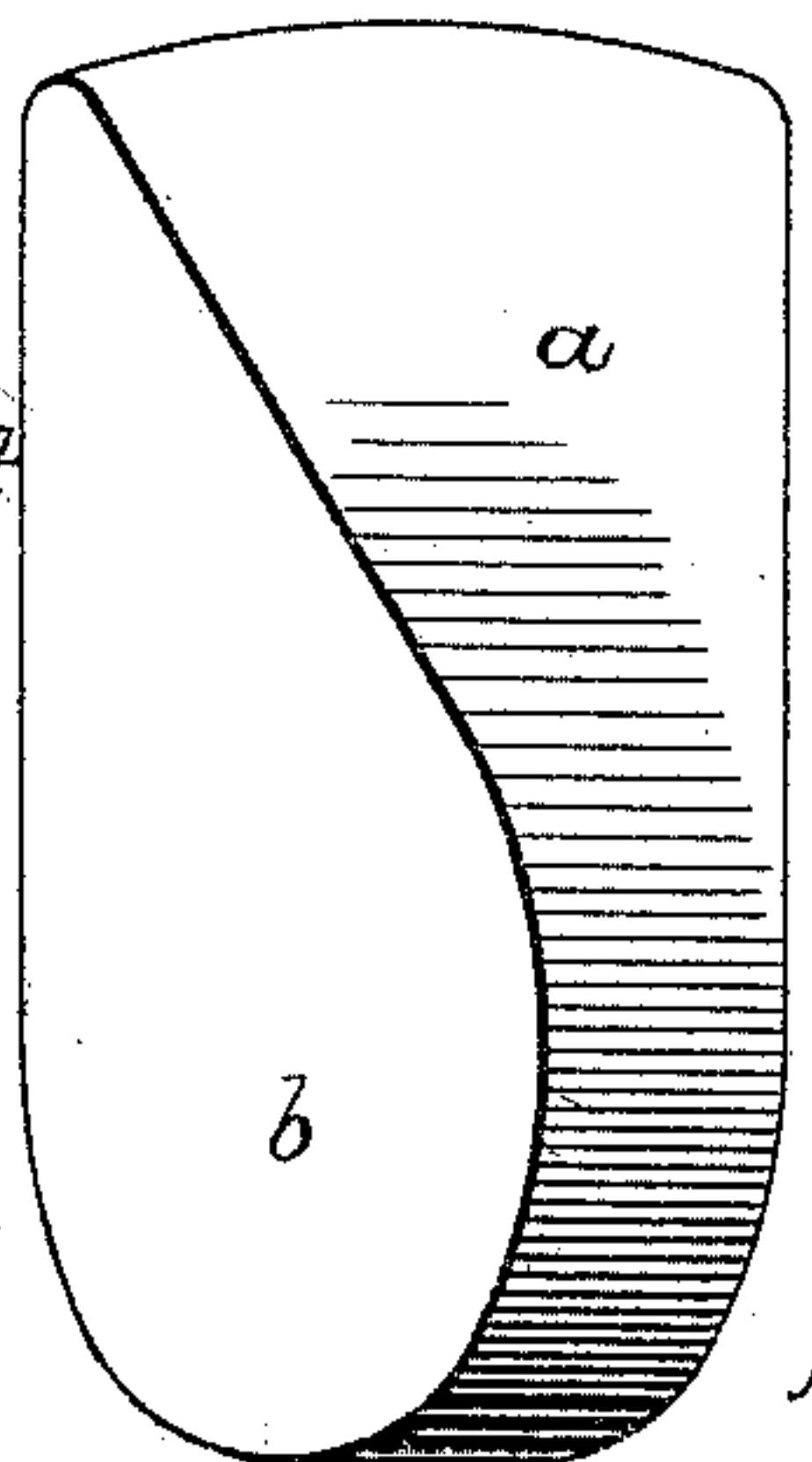


FIG. 5.

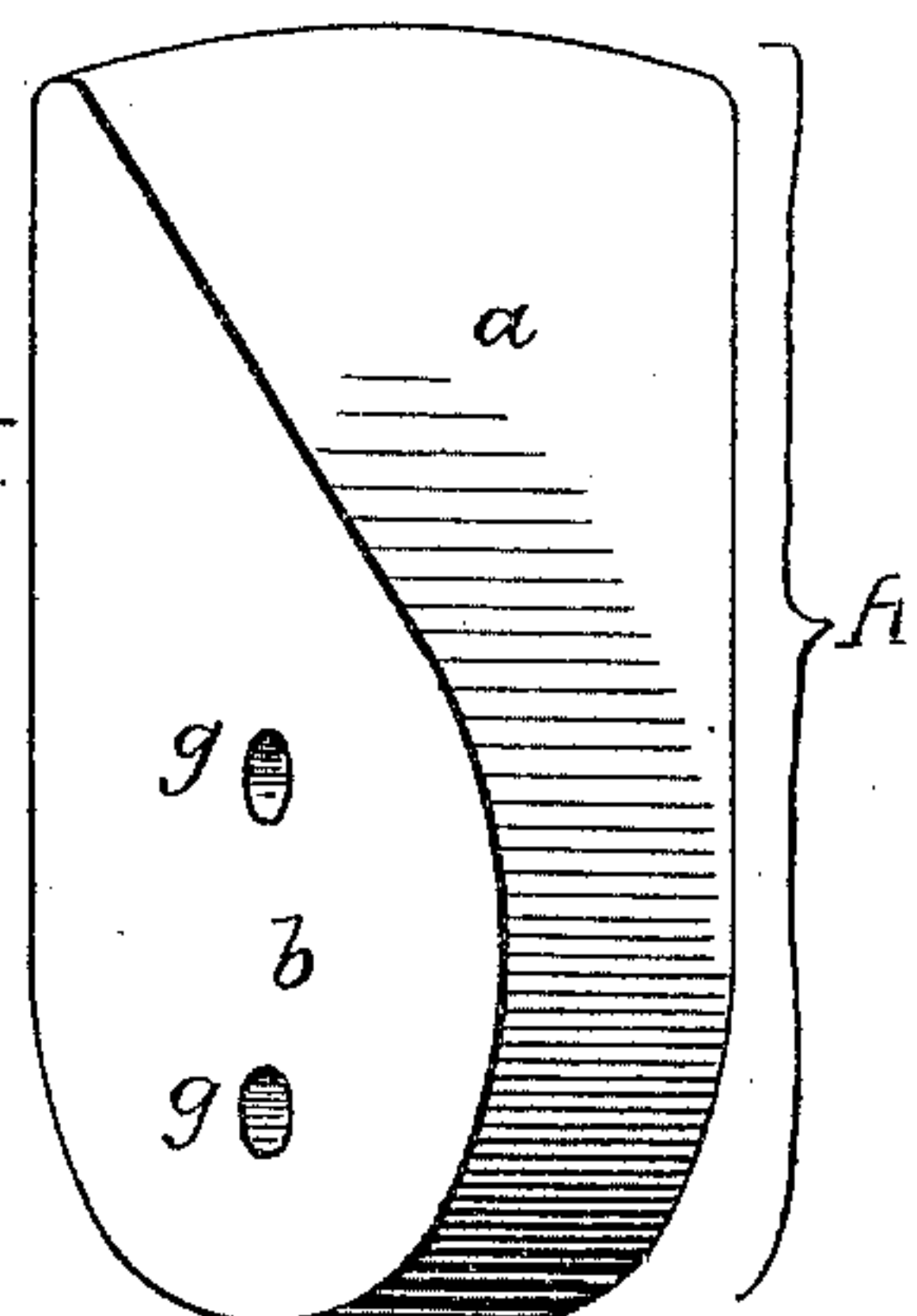


FIG. 2.

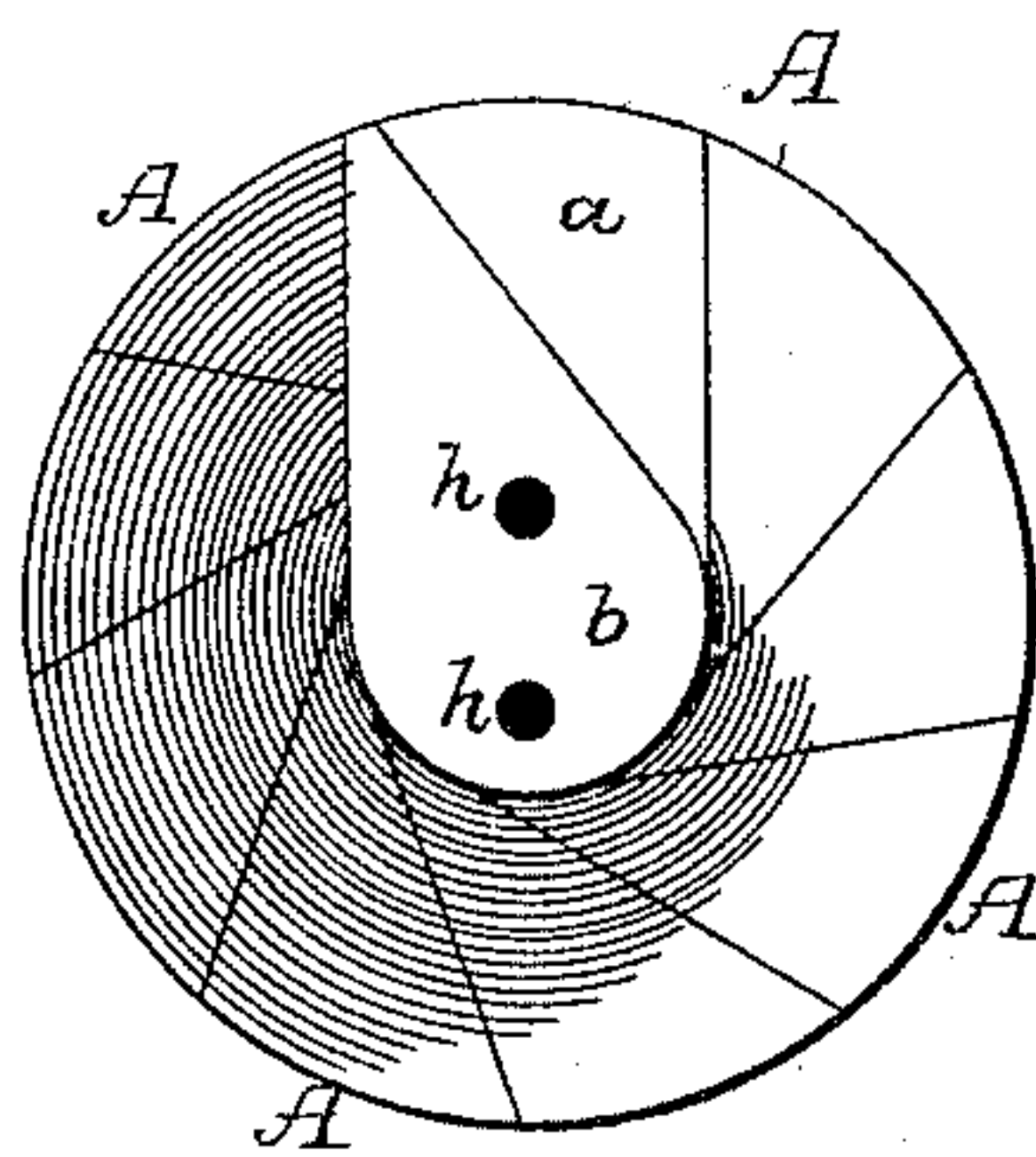


FIG. 6.



Witnesses
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UNITED STATES PATENT OFFICE.

WILLIAM H. CORNELL, OF TITUSVILLE, PENNSYLVANIA.

SECTIONAL SCREW-CONVEYER.

SPECIFICATION forming part of Letters Patent No. 409,454, dated August 20, 1889.

Application filed May 23, 1887. Serial No. 239,086. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM H. CORNELL, a citizen of the United States, and a resident of Titusville, Crawford county, Pennsylvania, have invented certain Improvements in Sectional Screw-Conveyers, of which the following is a specification.

My invention consists of an improvement in sectional screw-conveyers, such as that shown in Nelson's patent, No. 349,233, dated September 14, 1886, the objects of my invention being to strengthen, cheapen, and simplify the construction of such conveyer and to increase the capacity of the same without increasing the size of the screw. These objects I attain in the manner which I will now proceed to describe, reference being had to the accompanying drawings, in which—

Figure 1 is a side view of a screw-conveyer constructed in accordance with my invention. Fig. 2 is a transverse section of the same. Fig. 3 is a perspective view of a blank from which one of the sections of the conveyer is made; Figs. 4 and 5, perspective views of said section; and Fig. 6, a detached view of a double-pointed tack for use in constructing the conveyer.

The sectional screw-conveyer shown in the above-mentioned patent of Nelson consisted of a series of blanks, each comprising a hub and beveled wings or blades projecting in opposite directions therefrom, said sections being so secured upon a central shaft passing through the same that each blade formed part of a continuous screw-thread. I find, however, that single flights or sections—that is to say, sections projecting on one side only of the shaft—are preferable to the double flights, as they occupy less room in the trough than the double flights.

In carrying out my invention, therefore, I form each section A of the screw with a single beveled wing *a* only, as shown in Figs. 4 and 5, and I prefer to form the hub portion B of each section without central opening for the reception of a supporting-shaft, for I find that when the sections are secured together,

as described hereinafter, said supporting-shaft is not necessary to impart the proper longitudinal rigidity to the screw, plates *d*, carrying gudgeons *f*, being secured to the opposite end sections of the improved conveyer for the purpose of furnishing the necessary journals therefor.

Each section A of the screw has openings *g* formed therein for the reception of longitudinal confining-bolts *h*—such as shown in Figs. 1 and 2, for instance—whereby the sections are confined together longitudinally and secured in proper circumferential relation to each other; and I prefer to supplement the bolts in the performance of the latter duty by means of double-pointed tacks *m*, Fig. 6, one half of a tack being driven into one section of the screw and the other half into the adjoining section of the same.

By reason of the use of single sections much of the labor necessary to make a double-flighted screw-conveyer is dispensed with, and the manufacture of said conveyer is consequently cheapened considerably. Hence this feature of my invention may be adopted even in the manufacture of conveyers having central shafts; but the construction of the hubs of the sections in the manner shown in the drawings is preferred, greater strength and rigidity being then possessed by the central core of the conveyer, owing to the fact that the hub of each section is not weakened by the formation of a shaft-opening of large diameter therein.

I claim as my invention—

The within-described screw-conveyer, consisting of a number of sections confined together by longitudinal bolts, each section comprising a hub and a single projecting beveled blade, substantially as specified.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

WM. H. CORNELL.

Witnesses:

JAMES R. BARBER,
A. K. HOWARD.