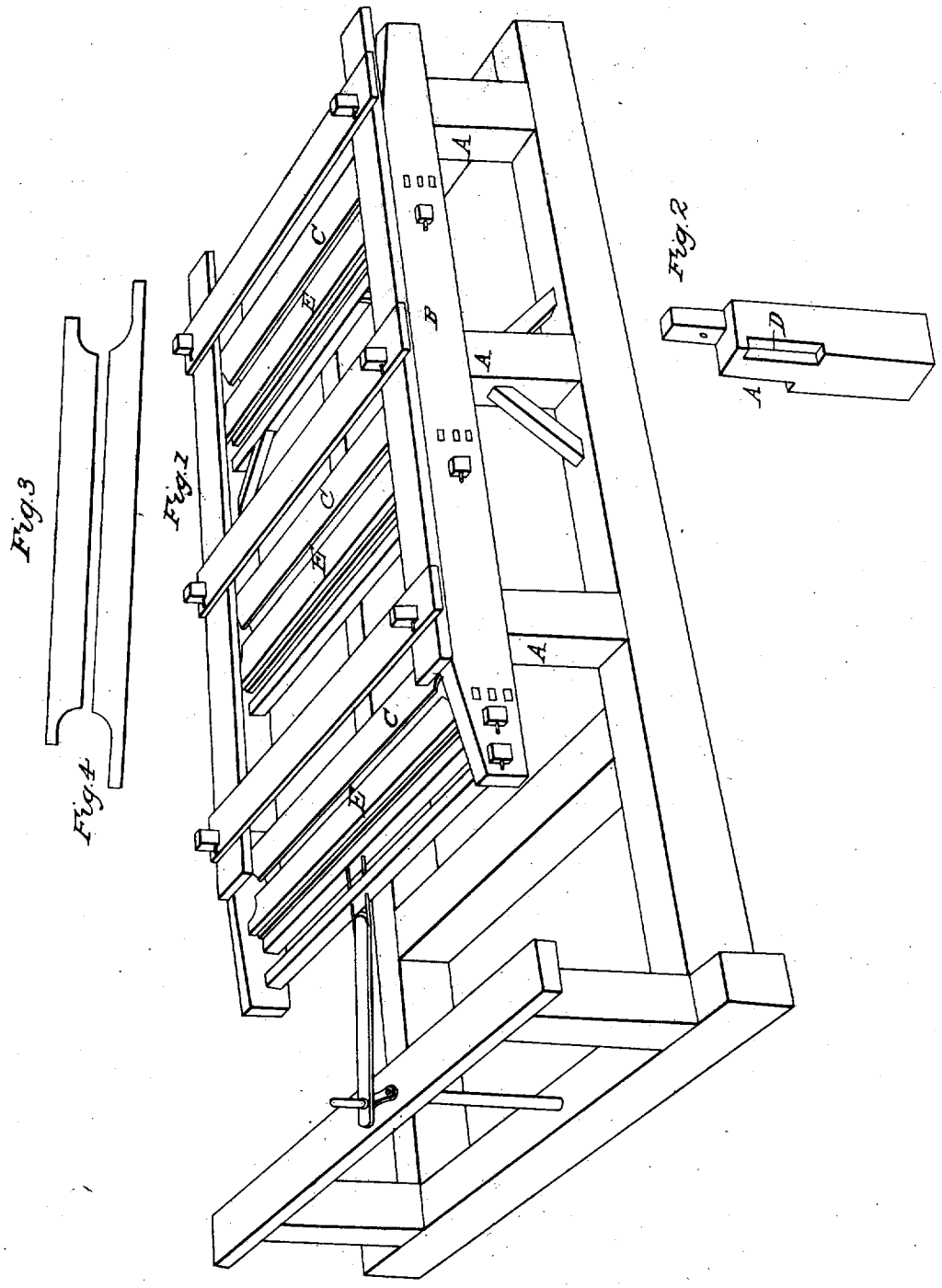
No Printed Specification Available

F. STITH.

Hemp Brake.

8798X

Patented April 22, 1835.



N. PETERS, Photo-Lithographer, Washington, D. C.

Apl 22 1835

Ferdinando Stith

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Letters Patent.

The Schedule referred to in these Letters Patent, and making part of the same, containing a description in the words of the said Ferdinando Stith, himself of his improvement in a Machine for the purpose of breaking of hemp and flax.

To all to whom these presents shall come.

Be it known that I, Ferdinando Stith of the Town of Franklin County of Williamson and State of Tennessee, have invented a new and useful Machine for breaking of hemp, and flax and that the following is a full and exact description of the construction and operation of the said Machine reference being had to the drawings hereunto annexed and forming part of this specification.

This Machine is composed of two parts which shall be called male and female or running and stationary frames. The stationary or female frame is constructed after the following manner. The base or mouth of it consists of two pieces of scantling placed parallel and opposite to each other and securely framed together by two cross bars of the same description of scantling, this base or mouth is 12 feet long and 4 feet wide and the scantlings of which it is made 5 inches wide and 5 inches thick. upon each of the long scantling, and three uprights 4 feet apart, and the frame being 4 feet wide makes them 4 feet apart every way. These uprights are three feet in length of timbers of timbers 5 & or 6 inches wide and three inches thick standing the broad way across the long timbers of the base at 8 inches from the base and of these uprights are shouldered on their outer sides two inches deep, and extending to their upper extremities. These shoulders are for the purpose of receiving and supporting the timbers of the Male portion of the Machine. 18 inches above these shoulders the uprights are cut into teeth to fasten on the cap

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uppper longitudinal timbers of the stationary frame, these timbers are 10 feet 10 inches long 5 inches wide and 4 inches thick. Loosely these uprights terminate in tenons about 2½ inches each way to bolt on the upper or rest bars there are number 4 feet 8 inches long 4 inches wide by two and a half inches thick. The middle set of uprights are braced each way forward and back. From the front of each of the uprights just below the tenons for the upper longitudinal timbers and opposite to the part shouldered to receive the running frame, blocks are taken out to the number desired, say 3 to 5 or more one inch deep, one inch wide and about one inch and a half apart, to receive the slats which constitute the female or stationary part of the brake. Into these mortises or resting places thus formed, are fitted the back parts of the slats. These slats are made of hickory timber split out and dressed down to about one inch in thickness on their backs, and diminished to a half inch in front. They are about 3 or 4 inches wide and four feet long, and fitted into the places designed for them in the uprights. These female slats being fitted to their places are made fast in them, by means of plates of iron 6 in number one over each end of each set of plates. These plates are 10 inches long 1½ inches wide, and a quarter of an inch thick. They are fitted over the fronts of the slats by cutting of them down in front, in the form of a shoulder so that the plates rest on them all level, through each of these plates of iron run two bolts which passing also through the uprights are made secure by screw taps on their extremities. In the basement frame of the brake, rests three heavy brace pieces of plank 4 feet long and 10 in the board; these are halved in the rear of each set of uprights, and are designed for the laborer to stand on. This constitutes the whole of the female or stationary portion of the Machine. I will now describe the male portion or the running frame. This consists of two pieces of dressed 12 feet 8 inches long 7 inches wide, by three

a half

a half inches thick, framed together by mortising proper bands in one
another 4 feet 5 inches long, 2 inches wide and 2½ inches thick. The
three of these are likewise placed 2 inches in the rear of the back or
respective ends of slats, perpendicular through the transverse rails to be keyed
on the outside. The fourth bar is in front for guard in the same
way, and serves as the weighboard, receiving a pin to secure the
iron hook and handle of the pitman. These front bars are given
this greater security and strength by means of a couple of iron
bolts that pass through them, and have them bolted together
on each side of the hooked handle that holds the pitman, at suita-
ble distances these runners receive the male slats by sets of two
three or more slats for each set; this running frame with its
sets of runners or slats and rods here described stationary frame, and
set upon the aforesaid stationary frame, and
to slide the before described stationary frame, and
set upon the aforesaid stationary frame.
The machine that I have
just now described, having been designed for reeling cotton
three three brakes in front and adjusted to accomodate two or three
slats, these slats like those of the stationary frame, are of
hickory timber about one and a half inches thick in the
front part and tapering in front to a half inch made round
& smooth on the edges, and between these and from inches a-
part. The ends of these slats terminate in tenons working
loose through the sides of the runners each way, and receive
their steadfast by means of thick shoulders in the inside
with the ends of the mortises on the end sides of the runners
(each pair of) for those of the running frame which stands
in the rear in form as described with the brakes.
This constitutes the
whole of what I call the male portion of the machine,
the machine is propelled by a like power by means of a universal
joint on the upper extremity of the shaft of any water wheel,
or a revolution of the wheel there by the aid of the pitman
to give a play of 12 inches to the running frame. This running
frame with sets of male slats are placed in such relation

to the

in the forward part of the stationary frame that at every re-
volution the cane is pushed into the other and succeeds again,
which Laborer never takes his hand on the broad plank
placed on the basement of the stationary frame and with
both hands feeds the machine first holding the bough by
one extremity and then by the other, shaking it occasionally
until the cane that it is well broke and freed from chaff. he
then hands it to the attendant or lays it aside and takes it
another turn of the cane material. I propose to have three
or four breakers to each machine, to feed one hand to each break,
and to let a fourth or fifth as the case may be, wait on the
whole, to thread up the cane material and to lay aside the
cleaned canes. From the experiments that I have made with
the Machine now in operation at my plantation, I am
satisfied that it may be equally well fed in motion by horse
or steam power, I am also convinced that it may be ex-
tended or diminished on the same plan as to employ additio-
-nal or less than 2. 3. 4. 5. or more hands according to the power that
can be brought to act on it. I have learnt from actual
experiment that the machine will do a good business at
ten only five strokes or revolutions in the minute, and that it
operates in proportion with the velocity of its momentum
that the proper principle for regulating its speed is that gained
at which a hand can feed it, which is near 100 strokes in the minute
For the purpose of lessening the friction, the wear and the power
necessary to propel the machine. I propose to rest the runners
on friction wheels placed on the shoulders of the upright,
or on Metallic plates, also floating the under surface of the runners with
iron or other metal. Specification. What I claim as my
own invention and not previously known in the above
described machine is the plan of running a break in
the horizontal manner, and or constructing of it with
one two three four or more breaks at the same time and in
the

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the same frame. The advantage that I conceive to exist in my mode of confining the slats, is that it allows them to spring while they are still held fast, each to its place, and the facility with which one is taken out and another substituted in its place, when it becomes necessary to shift them. The slats of my brakes are all diminished in thickness from one either extremity to the centre, so as to enlarge the spaces between them in the central portion while they approximate towards either end.

Witnesses
Thos Hardiman
Jas. Hogan Jr.

Ferdinande Stith

(1632 words)

(Drawing)

(Granted April 22. 1835)