ENGINEERS SA MANUFACTURERS

Stephens-Adamson Mfg. Co.

CONVEYORS · ELEVATORS · REDLER CONVEYOR-ELEVATORS · TRANSMISSION EQUIPMENT

FACTORIES: AURORA, ILLINOIS - LOS ANGELES, CALIF. - BELLEVILLE, ONTARIO

AURORA, ILLINOIS

D. B. PIERSEN, Chairman of Board
L. S. STEPHENS, President
R. C. PIERCE, Vice President
F. G. ADAMSON, Treasurer
C. A. KRAUSE, Asst. Treasurer
C. H. ADAMSON, Secretary
R. L. GRUBE, Asst. Secretary
M. A. KENDALL, Chief Engineer

May 27, 1942

Copper Range Company
Painesdale, Michigan.

Attention: Wm. H. Schacht, President.

Gentlemen:

Referring to your letter of May 22, we have made a preliminary study of your screening problem. While it would not be possible to make any close figures without a more complete knowledge of the material to be screened, we estimate that you could handle about 2 TPH per square foot of screening area with 3/16" square openings and about 3 TPH with 3/16" x 3/8" openings. These figures are based on the assumption that your material contains about equal proportions of the various sizes between 1/2" and 0 and the figures might be greatly increased if there is a large proportion of fines.

The enclosed sheets contain information as to the design of our standard screens and dimensions. As you will see the screens are rugged and intended for severe service.

If you would care to have us make more exact calculations as to the number and size of screens necessary for your work, we will be glad to do this if you will give us particulars as to the sieve analysis of the material at the feed and the weight of the material per cubic foot. We assume that the oversize is re-crushed and that all of the material ultimately has to pass through 3/16". If this is the case, you will not require high screening efficiency, but if our assumption is wrong, please let us have, also, a figure on the screening efficiency that you desire.

Yours truly,
STEPHENS-ADAMSON MFG. CO.

A. D. Sinden

A. D. Sinden,
Asst. Chief Engineer.
m

COPPER RANGE CO.
W. H. SCHACHT, PRESIDENT
RECEIVED
MAY 29 1942
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Stephens-Adamson Mfg. Co.

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M. A. KENDALL, Chief Engineer

May 22, 1942.

Copper Range Company,
Painesdale,
Michigan.

Attention Mr. John J. Vitton, Engineer

Gentlemen:

In accordance with your request of the 21st, we are sending you our general catalog #55 describing our complete line.

We also have a letter from you asking for catalog on our Vibrating Screens, which are fully covered in the same book.

We shall greatly appreciate your inquiries.

Yours very truly,
STEPHENS-ADAMSON MFG. CO.

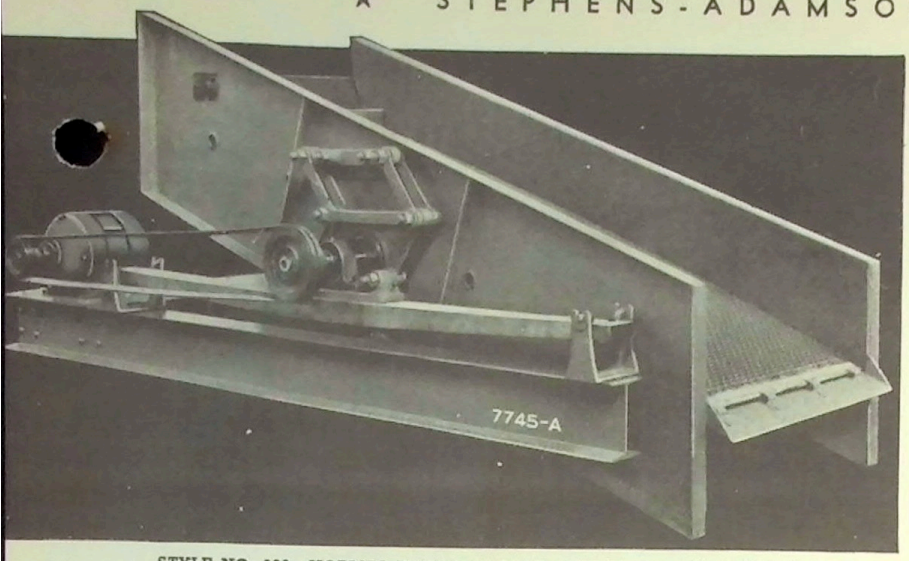
D.B.Piersen.

S-A VIBRATOR SCREENS

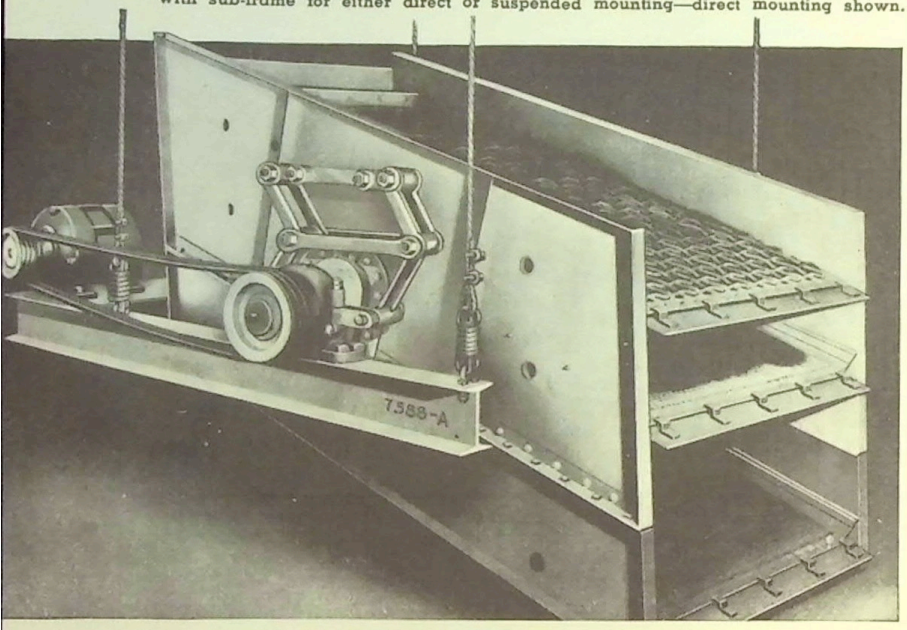
Styles No. 300 and 400 with Positive Vibration

Style No. 300 for Normal Duty

Style No. 400 for Heavy Duty



STYLE NO. 300—NORMAL DUTY VIBRATOR SCREEN, ruggedly built, with all of the S-A features for highest screening efficiency and convenience in operation. Furnished with sub-frame for either direct or suspended mounting—direct mounting shown.



STYLE No. 400—HEAVY DUTY VIBRATOR SCREEN. built with super strength for heaviest screening and scalping. Also furnished with either direct or suspended sub-frame—suspended type shown. with coil springs and cables to prevent vibration from reaching building.

These two screens are the most effective and economical units produced for accurate, high capacity screening—designed by experts and include every worthwhile feature and convenience. Hundreds in daily use screening coal, sand, gravel, stone, fertilizer, chemicals and many other materials.

Positive Vibration, Uniformly Distributed over Entire Screening Surface—Vibration is produced by the rapid rotation of an eccentric shaft, made stiff enough to prevent deflection. Screen body, with rigid panel supports, imparts vibration uniformly to every square inch of screen surface.

Accurate, High Capacity Screening—Eccentric shaft is ground for proper amplitude of vibration for each individual screen—to prevent blinding and to pass each particle over screen openings in every conceivable position before it is discharged as oversize.

Quick-Change, Reversible Screen Panels—See detail illustration on following page. Screening surface is stretched over a longitudinal arch, to distribute material uniformly over entire width.

Perfect Balance—Adjustable weights balance screen body and reduce reaction on outer bearings.

Wear-Reducing Loading Tray—Receives material, spreads load across screen and reduces wear on screen surface at feed end.

Mechanical Stabilizer

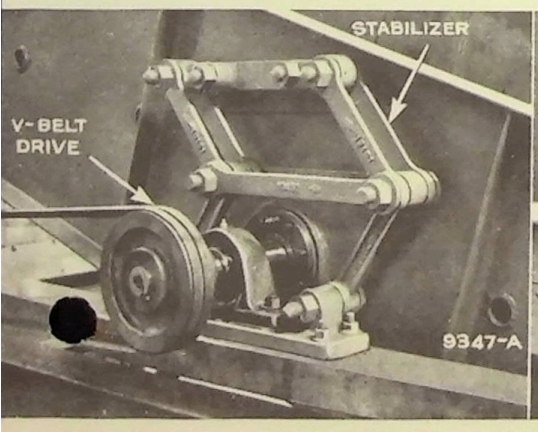
The parallel arms of this pantograph stabilizer hold the screen body at a definite angle without hindering the free vibrating motion of the body. By loosening two bolts, the angle of the screen body can be changed (from 12° to 24°) to suit material and capacity being handled.

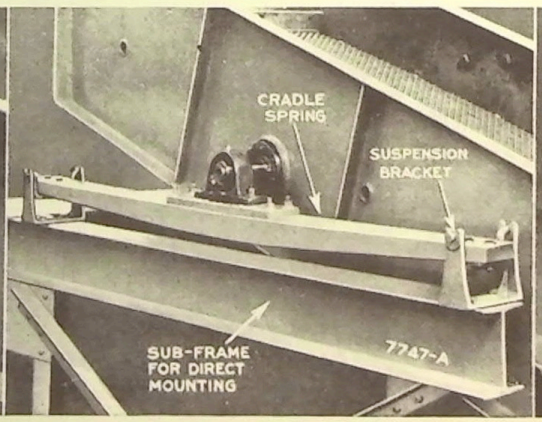
Cradle Springs for Direct Mounting

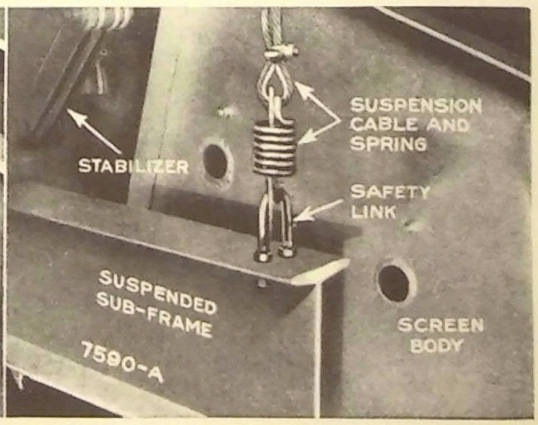
Both normal and heavy duty screens can be furnished with subframe for direct mounting on building supports. Outer bearings rest on special cradle springs supported at the ends in suspension brackets. These springs effectively prevent vibration from reaching the building.

Suspension Mounting

The suspended subframe, with coil springs and suspension cables at corners, can also be furnished with both normal and heavy duty screens. The springs absorb vertical vibration and cables prevent horizontal vibration from reaching building supports.







S-A VIBRATOR SCREENS

Styles No. 300 and 400 with Positive Vibration

Style No. 300 for Normal Duty
Style No. 400 for Heavy Duty

(Continued from previous page)

Pantograph Stabilizer—Parallel arms allow free vibrating action and yet hold screen at any desired angle without rocking or bouncing. Permits instant adjustment of screening angle (12° to 24°).

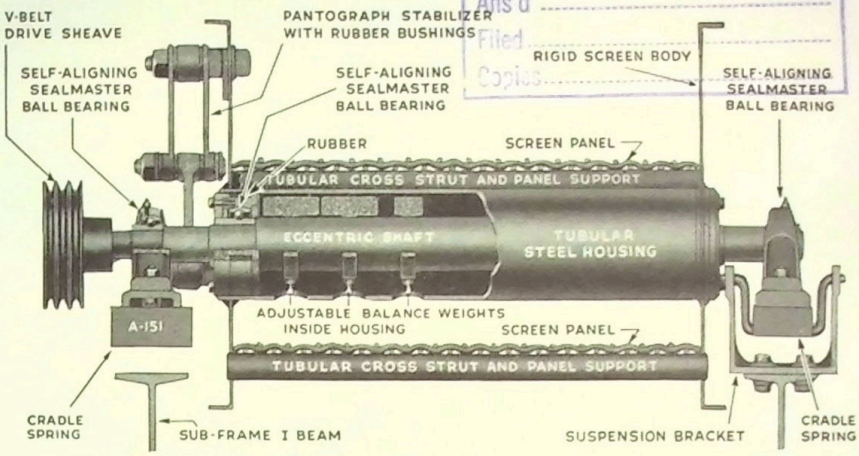
Self-Aligning Bearings—Highest grade ball or roller bearings, with pressure lubrication, and efficient seals are furnished with self-aligning feature.

Two Types of Sub-Frame—Both style No. 300 normal and style No. 400 heavy duty screens are furnished complete with structural steel subframes to insure alignment of bearings, drive, etc., and to prevent vibration from reaching building supports. For **direct mounting**, the subframe is equipped with cradle springs to carry screen. For **suspension mounting**, screen is bolted directly to sub-frame which is suspended from overhead supports by coil springs and cables at four corners.

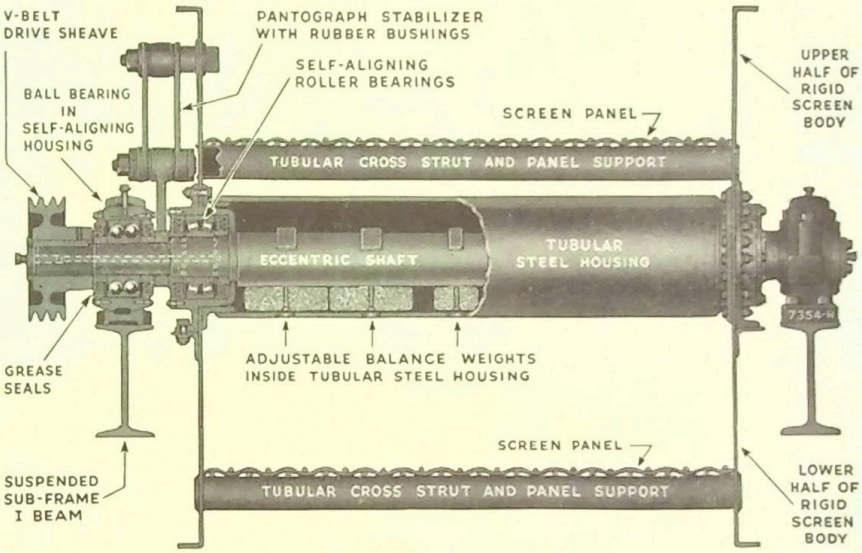
Enclosed Motor Drive—Totally enclosed, fan cooled motor, with multiple V-belt recommended.

Sizes and Capacities—For estimating size of Screen to use, refer to data on page 503. For final size, speed, amplitude of vibration, and other details send us data requested on page 501—our experienced engineers will be glad to give detailed specifications on the screen you need.

(Continued on following page)



STYLE NO. 300 NORMAL DUTY VIBRATOR SCREEN—Positive vibration of constant amplitude is accomplished by means of the eccentric shoulders ground on shaft. Adjustable balance weights protected by tubular housing.



STYLE NO. 400 HEAVY DUTY VIBRATOR SCREEN—Cast steel, tubular cross member houses eccentric shaft and inner bearings and gives extra rigidity to frame.

Screen Panels Stretched Longitudinally

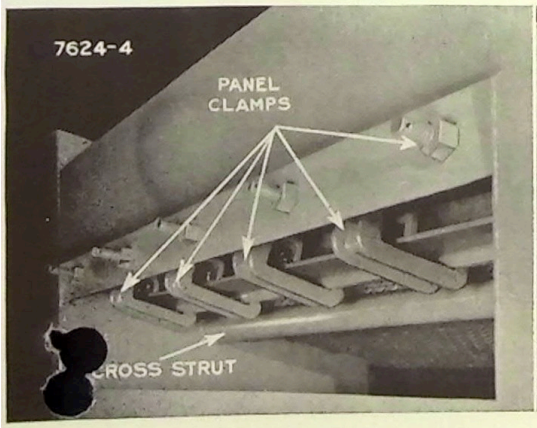
Panels, with stiffening angles at ends, are stretched over tubular cross struts by means of convenient cast steel clamps. The longitudinal arch eliminates whipping and prevents concentration of material at sides. Clamps are easily unhooked for changing or reversing panels.

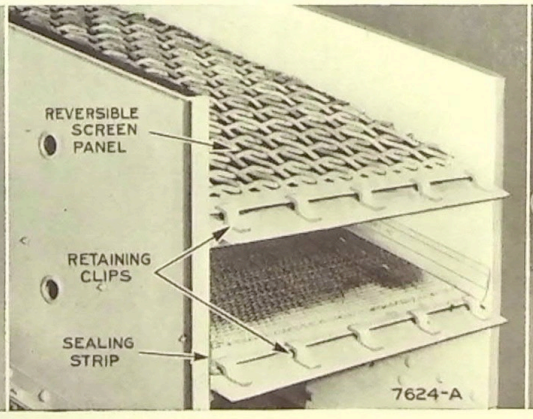
Quick-Change, Reversible Screen Panels

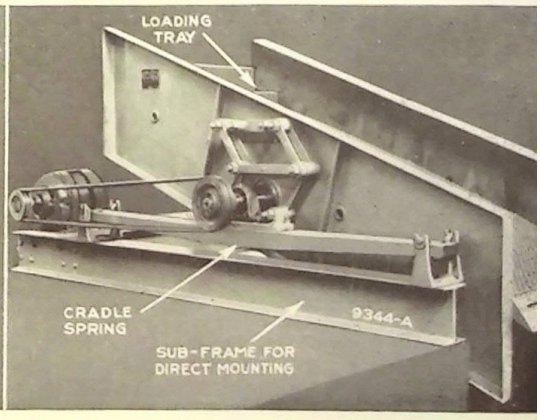
Panels are easily slid in or out of place, from rear of screen. The front of panel drops into retaining clips shown and panel is tightened as shown at left. Rubber sealing strips are furnished for sides of panels handling fine materials, to prevent leakage.

Insulates Building from Vibration

The illustration below shows a style No. 300 normal duty Vibrator Screen with subframe for direct mounting. Both this type and the suspension type of mounting effectively absorb the reaction of screen and prevent practically all vibration from reaching building supports.







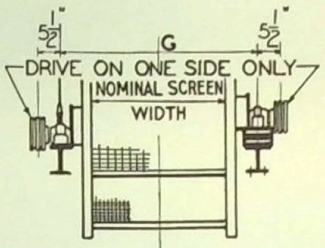
S-A VIBRATOR SCREENS

Styles No. 300 and 400

(Continued from previous page)

Information Required for Quotation—Definite knowledge of the capabilities of vibrator screens, gained through hundreds of controlled tests, are at your service. Send us the "Information Required" as listed on page 501—our engineers will specify the screen for highest screening efficiency at lowest cost.

Clearance Dimensions—The following tables cover style No. 300 Normal and style No. 400 Heavy Duty Screens complete with structural steel sub-frames for either (1) cradle-spring mounting, to be set directly upon building supports, or (2) cable and spring suspension from overhead supports. Dimensions given are for screens set at 18°. This screening angle can be adjusted from 12° to 24°. Feed and discharge chutes arranged for screen set at 24° slope will clear screen body at any angle within normal range of screen. Certified dimension sheets furnished with screens. Screens can be assembled with drive on either side and are specified as right or left hand—looking in direction of travel of material.



Half front view of suspension mounted type (with right hand drive).

Half front view of cradle-spring mounted type (with left hand drive).

STYLE NO. 300—NORMAL DUTY VIBRATOR SCREENS

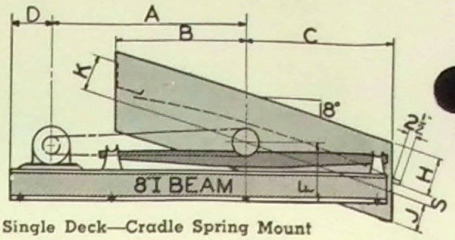
Decks	Nominal Screen Size (Ft.)	†Maximum Vibration Amplitude	†Maximum Cloth Opening	Dimensions in Inches* A	B	C	D	F	G	H	J	K	L	M	N	R	S	H.P. of Motor	Approx. Wt. in Lbs.‡
1	2x6	.3	2	52¾	34	41½	11¼	17	35	13¼	8	10¾				12¼	3¼	2	1730
	3x6	.3	2	52¾	34	41½	11¼	17	47	13¼	8	10¾				12¼	3¼	2	1892
	4x6	.3	2	52¾	34	41½	11¼	17	59	13¼	8	10¾				12¼	3¼	2	2085
	3x8	.3	2	60¾	46½	52	11¼	17	47	14	8	9¾				12¼	2½	3	2079
	4x8	.3	2	60¾	46½	52	11¼	17	59	14	8	9¾				12¼	2½	3	2277
	5x8	.3	2	60¾	46½	52	11¼	17	71	14	8	9¾				12¼	2½	3	2455
2	2x6	.25	1½	52¾	34	41½	11¼	17	35	13¼	4¼	10¾	3¼	10¾		12¼	3¼	2	1959
	3x6	.3	2	52¾	34	41½	11¼	17	47	13¼	4¼	10¾	3¼	10¾		12¼	3¼	3	2172
	4x6	.3	2	52¾	34	41½	11¼	17	59	13¼	4¼	10¾	3¼	10¾		12¼	3¼	3	2425
	3x8	.25	1½	60¾	46½	52	11¼	17	47	14	3½	9¾	3¼	11½		12¼	2½	3	2409
	4x8	.22	¾	60¾	46½	52	11¼	17	59	14	3½	9¾	3¼	11½		12¼	2½	5	2754
	5x8	.12	⅛	60¾	46½	52	11¼	17	71	14	3½	9¾	3¼	11½		12¼	2½	5	2997
3	2x6	.15	¼	52¾	34	41½	11¼	17	35	9¾	4¼	10¾	3¼	10¾	11	12¼	3¼	5	2263
	3x6	.22	¾	52¾	34	41½	11¼	17	47	9¾	4¼	10¾	3¼	10¾	11	12¼	3¼	5	2531
	4x6	.12	⅛	52¾	34	41½	11¼	17	59	9¾	4¼	10¾	3¼	10¾	11	12¼	3¼	5	2849
	3x8	.12	⅛	60¾	46½	52	11¼	17	47	10½	3½	9¾	4¼	11½	11	12¼	2½	5	2841

*For construction purposes, use certified print only.
†Where larger screening openings or greater amplitude or vibration is required see Heavy Duty Screens Style No. 400.
‡Weights given for "Normal Duty" screens complete with sub-frame, motor and screen panels with one inch openings.

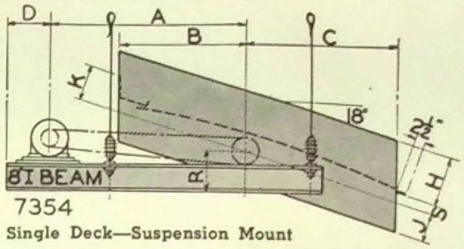
STYLE NO. 400—HEAVY DUTY VIBRATOR SCREENS

Decks	Nominal Screen Size (Ft.)	Dimensions in Inches* A	B	C	D	F	G	H	J	K	L	M	N	R	S	Horsepower of Motor	Approx. Weight in Lbs.‡
1	2x6	52¾	34	41½	11¼	18½	35½	11¾	11½	13¾				12¾	6¼	3	2400
	3x6	52¾	34	41½	11¼	18½	47½	11¾	11½	13¾				12⅜	6¼	3	2700
	4x6	52¾	34	41½	11¼	18½	59½	11¾	11½	13¾				12⅜	6¼	3	2800
	3x8	60¾	46½	52	12½	18½	47½	12¾	11½	12¾				12⅜	5¼	3	2900
	4x8	60¾	46½	52	12½	18½	59½	12¾	11½	12¾				12⅜	5¼	5	3200
	5x8	60¾	46½	52	12½	18½	71½	12¾	11½	12¾				12⅜	5¼	5	3500
	4x10	75¼	58	63½	12½	18½	59½	13¼	11½	12¼				12¾	4¾	5	3750
	5x10	75¼	58	63½	12½	18½	71½	13¼	11½	12¼				12⅜	4¾	5	4100
2	2x6	52¾	34	41½	11¼	18½	35½	11¾	4¼	13¾	9¾	17¼		12¾	6¼	3	2600
	3x6	52¾	34	41½	11¼	18½	47½	11¾	4¼	13¾	9¾	17¼		12⅜	6¼	3	2900
	4x6	52¾	34	41½	11¼	18½	59½	11¾	4¼	13¾	9¾	17¼		12⅜	6¼	5	3300
	3x8	60¾	46½	52	12½	18½	47½	12¾	3¼	12¾	10¾	18¼		12⅜	5¼	5	3500
	4x8	60¾	46½	52	12½	18½	59½	12¾	3¼	12¾	10¾	18¼		12⅜	5¼	5	3800
	5x8	60¾	46½	52	12½	18½	71½	12¾	3¼	12¾	10¾	18¼		12⅜	5¼	5	4000
	4x10	75¼	58	63½	12½	18½	59½	13¼	2¾	12¼	11¼	18¾		12⅜	4¾	7½	4250
	5x10	75¼	58	63½	12½	18½	71½	13¼	2¾	12¼	11¼	18¾		12⅜	4¾	7½	4650
3	2x6	52¾	34	41½	11¼	18½	35½	9	4¼	13¾	9¾	17¼	12	12¾	6¼	3	3200
	3x6	52¾	34	41½	11¼	18½	47½	9	4¼	13¾	9¾	17¼	12	12⅜	6¼	5	3600
	4x6	52¾	34	41½	11¼	18½	59½	9	4¼	13¾	9¾	17¼	12	12⅜	6¼	5	4000
	3x8	60¾	46½	52	12½	18½	47½	10	3¼	12¾	10¾	18¼	12	12⅜	5¼	7½	3800
	4x8	60¾	46½	52	12½	18½	59½	10	3¼	12¾	10¾	18¼	12	12⅜	5¼	7½	4100
	5x8	60¾	46½	52	12½	18½	71½	10	3¼	12¾	10¾	18¼	12	12⅜	5¼	7½	4300
	4x10	75¼	58	63½	12½	18½	59½	10½	2¾	12¼	11¼	18¾	12	12⅜	4¾	10	4550
	5x10	75¼	58	63½	12½	18½	71½	10½	2¾	12¼	11¼	18¾	12	12⅜	4¾	10	4900

*For construction purposes, use certified print only.
‡Weights given for heavy duty screens complete with sub-frame, motor and screen panels.



Single Deck—Cradle Spring Mount



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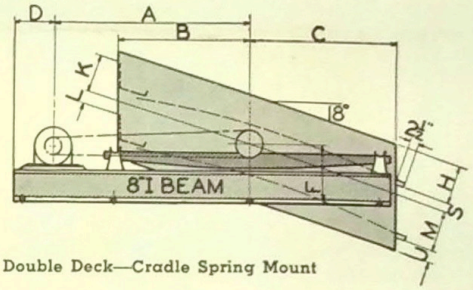
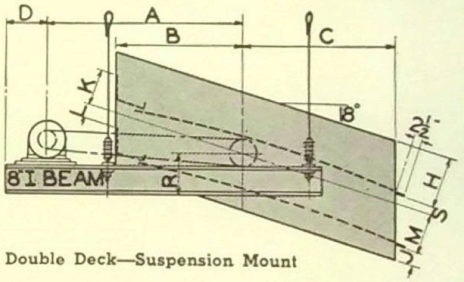
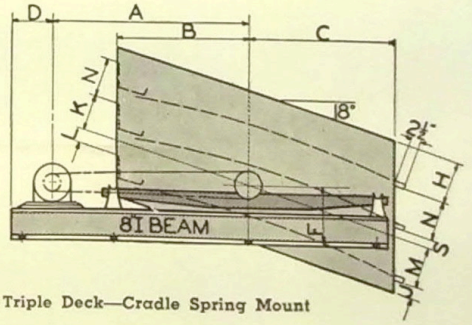
Single Deck—Suspension Mount



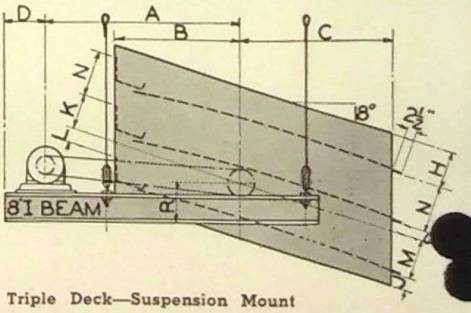
Double Deck—Cradle Spring Mount



Double Deck—Suspension Mount



Triple Deck—Cradle Spring Mount



Triple Deck—Suspension Mount

May 22, 1942

Stephens-Adamson Manufacturing Company
Aurora, Illinois

Gentlemen:

We have a screening problem of handling about 700 tons of feed per hour of -1/2" crushed ore, being one-half shale and one-half sandstone which we will have in closed circuit with impact crushers and screens, and desire to screen out the -3/16" material. The new feed plus the circulating load may reach 1200 to 1400 tons.

The ore is generally dry but may run as high as 4% to 5% moisture.

How many tons of new feed can we expect per square foot through 3/16" square screen and 3/16" wide slotted screen.

Please furnish us your screen catalogs with dimension sheets and any data you may have for computation of screen size.

Very truly yours,

President

WHS/BGF